

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

U.S. Ethernet Innovations, LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	Civil Action No. 6:11-cv-00491-LED
	§	
Texas Instruments Incorporated, <i>et al.</i>	§	JURY TRIAL REQUESTED
	§	
Defendants.	§	

ANSWER AND AFFIRMATIVE DEFENSES OF
DEFENDANT BROTHER INTERNATIONAL CORPORATION

Defendant, Brother International Corporation (“Brother”) answers the Complaint (“Complaint”) of U.S. Ethernet Innovations, LLC (“Plaintiff” or “USEI”) as follows:

I. NATURE OF THE ACTION

1. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

2. Brother denies each of the allegations of Paragraph 2 that are directed at Brother. As to the other Defendants, Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

3. Brother admits that Plaintiff purports to seek damages for each Defendants’ alleged infringement of the ‘094 Patent, the ‘872 Patent, the ‘313 Patent, and the ‘459 Patent. Brother denies each of the allegations of infringement of Paragraph 3 that are directed to Brother. As to the other Defendants, Brother lacks knowledge or information sufficient to form a belief as

to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

II. PARTIES

4. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

5. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

6. Brother admits the allegations in this paragraph of the Complaint.

7. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

III. JURISDICTION AND VENUE

8. Brother admits the allegations in this paragraph of the Complaint.

9. Brother admits the allegations in this paragraph of the Complaint.

10. Brother admits that, for purposes of this action only, venue is legally proper. As to other defendants, Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

11. Brother admits that, for purposes of this action only, it is minimally subject to personal jurisdiction in this Court, although it denies that it has committed any infringement in the State of Texas or the Eastern District of Texas, as alleged. As to other defendants, Brother

lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

IV. PATENTS-IN-SUIT

12. Brother admits that Exhibit A purports to be a copy of the '094 patent. On information and belief, Brother admits that the '094 patent is entitled "Method for Automatic Initiation of Data Transmission" and was issued on March 24, 1998. Brother admits that on the face of the Exhibit A, 3Com Corporation is listed as the assignee and that Brian Petersen, David R. Brown, and W. Paul Sherer are listed as inventors. Brother denies all remaining allegations in this paragraph of the Complaint.

13. Brother admits that Exhibit B purports to be a copy of the '872 patent, although Figures 2, 4, and 12 of Exhibit B appear to be incomplete. On information and belief, Brother admits that the '872 patent is entitled "Apparatus for Automatic Initiation of Data Transmission" and was issued on July 18, 1995. Brother admits that on the face of the Exhibit B, 3Com Corporation is listed as the assignee and that Brian Petersen, David R. Brown, and W. Paul Sherer are listed as inventors. Brother denies all remaining allegations in this paragraph of the Complaint.

14. Brother admits that Exhibit C purports to be a copy of the '313 patent, although Figure 2 of Exhibit C appears to be incomplete. On information and belief, Brother admits that the '313 patent is entitled "Network Interface with Host Independent Buffer Management" and was issued on March 29, 1994. Brother admits that on the face of the Exhibit C, 3Com Corporation is listed as the assignee and that Brian Petersen, W. Paul Sherer, David R. Brown, and Lai-Chin Lo are listed as inventors. Brother denies all remaining allegations in this paragraph of the Complaint.

15. Brother admits that Exhibit D purports to be a copy of the '459 patent, although Figure 4 of Exhibit D appears to be incomplete. On information and belief, Brother admits that the '459 patent is entitled "Network Adapter with Host Indication Optimization" and was issued on April 26, 1994. Brother admits that on the face of the Exhibit D, 3Com Corporation is listed as the assignee and that Brian Petersen, W. Paul Sherer, David R. Brown, and Lai-Chin Lo are listed as inventors. Brother denies all remaining allegations in this paragraph of the Complaint.

16. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

V. ACCUSED PRODUCTS

17. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

18. Brother admits that it currently imports, uses, offers for sale, and sells the TD-4100N and the HL-6050DN. Brother denies the remaining allegations of this paragraph of the Complaint.

19. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

COUNT I INFRINGEMENT OF U.S. PATENT NO. 5,732,094

20. Brother restates the responses set forth in paragraphs 1 through 19 of this Answer and incorporates them by reference.

21. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

22. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

23. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

24. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

25. Brother denies the allegations in this paragraph of the Complaint.

26. Brother denies the allegations in this paragraph of the Complaint.

27. Brother denies the allegations in this paragraph of the Complaint.

28. Brother denies the allegations in this paragraph of the Complaint.

29. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

30. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

31. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

32. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

COUNT II INFRINGEMENT OF U.S. PATENT NO. 5,434,872

33. Brother restates the responses set forth in paragraphs 1 through 32 of this Answer and incorporates them by reference.

34. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

35. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

36. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

37. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

38. Brother denies the allegations in this paragraph of the Complaint.

39. Brother denies the allegations in this paragraph of the Complaint.

40. Brother denies the allegations in this paragraph of the Complaint.

41. Brother denies the allegations in this paragraph of the Complaint.

COUNT III INFRINGEMENT OF U.S. PATENT NO. 5,299,313

42. Brother restates the responses set forth in paragraphs 1 through 41 of this Answer and incorporates them by reference.

43. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

44. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

45. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

46. Brother lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

47. Brother denies the allegations in this paragraph of the Complaint.

48. Brother denies the allegations in this paragraph of the Complaint.

49. Brother denies the allegations in this paragraph of the Complaint.

50. Brother denies the allegations in this paragraph of the Complaint.

COUNT IV INFRINGEMENT OF U.S. PATENT NO. 5,307,459

51. Brother restates the responses set forth in paragraphs 1 through 50 of this Answer and incorporates them by reference.

52. Brother denies the allegations in this paragraph of the Complaint.

53. Brother denies the allegations in this paragraph of the Complaint.

54. Brother denies the allegations in this paragraph of the Complaint.

55. Brother denies the allegations in this paragraph of the Complaint.

VI. PRAYER FOR RELIEF

56. Brother denies that Plaintiff is entitled to any of the relief set forth in the Prayer for Relief in the Complaint.

57. Brother denies each and every allegation not specifically admitted in this Answer.

VII. DEMAND FOR JURY TRIAL

58. Brother admits that Plaintiff demands a trial by jury.

VIII. AFFIRMATIVE DEFENSES

FIRST AFFIRMATIVE DEFENSE (NON-INFRINGEMENT)

59. Brother has not directly or indirectly infringed any valid claim of any of the '094 Patent, '872 Patent, '313 Patent, and '459 Patent, nor is Brother currently doing so, either literally or under the doctrine of equivalents.

SECOND AFFIRMATIVE DEFENSE (INVALIDITY)

60. The claims of the '094 Patent, '872 Patent, '313 Patent, and '459 Patent are invalid under Title 35 of the United States Code, including but not limited to 35 U.S.C. §§ 101, 102, 103, and/or 112.

THIRD AFFIRMATIVE DEFENSE (LACHES)

61. Plaintiff is barred from recovery for the alleged infringement of the '094 Patent, '872 Patent, '313 Patent, and '459 Patent by the doctrine of laches.

**FOURTH AFFIRMATIVE DEFENSE
(LICENSE)**

62. Some or all of Brother's accused products are licensed under the '094 Patent, '872 Patent, '313 Patent, and '459 Patent and/or subject to the doctrines of patent exhaustion and implied license.

**FIFTH AFFIRMATIVE DEFENSE
(35 U.S.C. §§ 286-288 LIMITATION ON DAMAGES)**

63. Plaintiff's ability to recover from Brother is limited by 35 U.S.C. §§ 286-288.

**SIXTH AFFIRMATIVE DEFENSE
(INEQUITABLE CONDUCT)**

64. Each of the patents-in-suit is unenforceable because of inequitable conduct committed by individuals associated with the filing and prosecution of the patents-in-suit. The basis for this defense is detailed in the following paragraphs. In summary, during the pendency of the five applications that ultimately led to the four patents-in-suit, various permutations of the same prosecution counsel, the same assignee, and the same inventors filed and prosecuted at least 22 U.S., U.S. PCT, and foreign applications for patents on variants of the technology at issue in this case.

65. That is, various subsets of the prosecution counsel, assignee, and the four inventors of the patents-in-suit filed the following 17 additional patent applications beyond the patents-in-suit:

- a. International Patent Application PCT/US1993/07027, based on the '313 Patent ('313 PCT);
- b. European Patent Application No. 0606462, based on the '313 PCT ('313 EP)

- c. International Patent Application PCT/US1993/07060, based on the '872 Patent ('872 PCT);
- d. European Patent Application No. 0606466, based on the '872 PCT ('872 EP);
- e. International Patent Application PCT/US1993/07056, based on the '459 Patent ('459 PCT);
- f. European Patent Application No. 0607412, based on the '459 PCT ('459 EP);
- g. U.S. Patent No. 5,319,752 ('752 Patent);
- h. International Patent Application PCT/US1993/08866, based on the '752 Patent ('752 PCT);
- i. European Patent Application No. 0660955, based on the '752 PCT ('752 EP);
- j. U.S. Patent No. 5,392,406 ('406 Patent);
- k. International Patent Application PCT/US1993/08840, based on the '406 Patent ('406 PCT);
- l. U.S. Patent No. 5,530,874 ('874 Patent);
- m. International Patent Application PCT/US1993/12652, based on the '874 Patent ('874 PCT);
- n. European Patent Application No. 0682791, based on the '874 PCT ('874 EP);
- o. U.S. Patent No. 5,517,627 ('627 Patent);

p. International Patent Application PCT/US1994/09723, based on the '627 Patent ('627 PCT); and

q. U.S. Patent No. 5,412,782 ('782 Patent).

66. Many of these patent applications were identified as related to the applications that led to the patents-in-suit, yet their co-pendency was not disclosed to the examiners of the applications for the patents-in-suit. In most instances, the examiners in the patents-in-suit were not the examiners on the other related applications and had no way of knowing of their co-pendency.

67. During the prosecution of these related applications, many references were cited that disclosed limitations of the claims of the patents-in-suit, and thus would have been important to the examiners of the patents-in-suit, had they been disclosed. In fact, between the applications for the patents-in-suit and these related, yet undisclosed, other applications, over 60 prior art references were cited in one or more applications. Yet, during the prosecution of the applications that led to the asserted '313, '459, and '872 Patents, the applicants failed to disclose even a single reference. And, during the prosecution of the application that led to the '094 Patent, the applicants continued in their non-disclosure of references cited in related cases, submitting information disclosure statements that contained only a fraction of the 60-plus references that had been cited among the 22 related applications.

68. Moreover, during the prosecution of the related applications, many references were cited against various combinations of elements claimed to be novel in the patents-in-suit, and, in a number of instances, claims drawn to those combinations were rejected. As noted, most of these references were not disclosed during the prosecutions of the patents-in-suit. Neither was there disclosure of the rejections in parallel prosecutions of combinations that were material to

pending claims of the applications that led to the patents-in-suit. Taken collectively, all these prosecutions and the art cited in them, as well as the various rejections by the various examiners paint a picture of a technological landscape in which many of the claims of the patents-in-suit were anticipated and/or obvious and therefore not patentable.

69. Because the owner of the patents-in-suit, its counsel, and various of the named inventors on the patents-in-suit did not disclose the co-pendency of these applications, the material art cited during them, or the existence of adverse office actions by other examiners rejecting combinations claimed to be novel by the patents-in-suit, the examiners in the patents-in-suit were not aware of information that would have been material to their examination of the patents-in-suit. With knowledge of the co-pendency of these applications, the material art cited during them, or the existence of adverse office actions by other examiners rejecting combinations claimed to be novel by the patents-in-suit, the examiners in the patents-in-suit would have not allowed at least one claim in each of the patents-in-suit.

70. Many of the individuals with a duty of candor during the prosecutions leading to the patents-in-suit, thus, withheld information they knew or should have known to be material to the patents-in-suit. On information and belief, the single most reasonable inference able to be drawn from the evidence is that individuals with a duty of candor knew of at least some references, knew of the materiality of those references, and made a deliberate decision to withhold them. In light of the course of conduct by which the various prosecutions were each effectively siloed from one another and in light of the failure to disclose references that other examiners had explicitly identified as invalidating claimed combinations, the applicants for the patents-in-suit engaged in inequitable conduct, which renders each of the patents-in-suit unenforceable.

71. In defense to Plaintiff's allegations that Brother has infringed the '459 Patent, Brother alleges that the '459 Patent is unenforceable by reason of inequitable conduct committed during the prosecution of that patent as follows:

a. Application No. 07/920,898 (the '459 Application), which ultimately led to the '459 Patent, was filed on July 28, 1992 on behalf of named inventors Brian Peterson, W. Paul Sherer, David R. Brown, and Lai-Chin Lo, and named assignee, 3Com Corporation. Mark Haynes of Fleisler, Dubb, Meyer & Lovejoy was identified as counsel for the owner and acted as prosecution counsel throughout. The '459 Patent issued on April 26, 1994.

The '872 Patent, PCT, and EP Applications

b. The Patentee committed inequitable conduct during the prosecution of the '459 Patent by failing to disclose the applications, rejections, and references related to the '872 Patent.

c. Application No. 07/920,893 (the '872 Application), which ultimately led to the '872 Patent, was filed on the same date by the same counsel on behalf of two of the same named inventors (Peterson and Brown) and the same assignee as the '459 Application (collectively, the '872 Applicants).

d. Ultimately, Paul Sherer, a named inventor in the '459 Application was added as a named inventor on what became the '872 Patent.

e. PCT Application PCT/US1993/07060 (the '872 PCT) claims priority to the '872 Application (having substantially the same disclosure) and was filed on July 27, 1993, by the same counsel on behalf of two of the same named inventors (Peterson and Brown) and the same assignee as the '459 Application. The European Patent Application EP0606466 (the '872

EP) based on the '872 PCT was filed on February 25, 1994, and lists three of the named inventors listed in the '459 Application (Petersen, Brown, and Sherer).

f. The '459 Application was reviewed by a different examiner than the '872 Application, the '872 PCT, and the '872 EP.

g. The '459 and '872 Patents' disclosures overlap to a significant extent. For example, both applications claim inventions involving beginning frame-processing operations prior to the complete buffering of frame data and using a frame buffering threshold to trigger such concurrent frame-processing operations.

h. In his Notice of Allowability of October 14, 1993, the examiner of the '459 Patent stated that the pending claims were being allowed because:

The prior art does not show or render obvious, inter alia, the claimed network frame transfer apparatus in which the data frame is transferred between a network transceiver and a host computer via a buffer and threshold logic is utilized to count the data transferred to and from the buffer and further in which an alterable storage location is provided which contains a threshold value and a counter, coupled to the buffer memory, is compared to the threshold value and an indication signal is generated and sent to the host computer responsive to the comparison.

i. During the prosecution of the '872 Patent, claims containing all of these limitations except for the "indication signal" were rejected as anticipated and/or obvious in light of multiple prior art references in the office action of October 26, 1993 (The October 26, 1993 Rejection).

j. At least the following references were reviewed by the '872 examiner, were cited in support of the October 26, 1993 Rejection, and were material to, but not disclosed during, the prosecution of the '459 Patent: U.S. Patents 5,043,981 (Firoozmand et al.); 4,860,193 (Bentley); 4,258,418 (Heath); 4,715,030 (Koch); 5,195,093 (Tarrab); and 5,210,749 (Firoozmand) (collectively, the '872-459 References).

k. On or about March 2, 1994, Petersen and Brown, named inventors of the '459 Application, filed a declaration in the '872 Application, stating that they were informed that the pending claims 1, 3, 6 and 11 in '872 Application were rejected as being anticipated by Firoozmand, et al..

l. The '872-459 References were material to, but not disclosed during, prosecution of the '459 application. The '872-459 References were determined by the '872 examiner to disclose singly, or in obvious combination, all limitations determined by the '459 examiner to be missing from the prior art except the "indication signal" claimed in the '459 Patent, and that latter limitation was, in fact, disclosed by, inherent in, and/or obvious in light of one or more of the '872-459 References.

m. During the prosecution of the '459 Patent, five of the '872-459 References (Firoozmand et al., Koch, Heath, Tarrab, and Firoozmand) were cited again to at least the assignee and prosecution counsel of the '872 Application in the December 7, 1993 '872 PCT International Search Report (the '872 ISR). These references were identified again by the searching authority as of "particular relevance," rendering the claimed invention anticipated or obvious.

n. All of the '872 Applicants were participants in the prosecutions of the '459 Patent and were persons with a duty of candor in the prosecution that led to the '459 Patent.

At least the '872 assignee and prosecution counsel were participants in the prosecutions of the '872 PCT, and the '872 EP and were persons with a duty of candor in the prosecution that led to the '459 Patent.

o. The '872 Applicants knew of the materiality to the '459 prosecution of (i) the copendency of the '872 Application, the '872 PCT, and the '872 EP, (ii) the October 26, 1993 Rejection, and (iii) the '872-459 References, because they knew that the '872 examiner had found these references to disclose most features of the combination which they had claimed to be novel in the '459 Patent and which the '459 examiner itemized in his notice of allowance. Further, they knew or should have known that the missing limitation was disclosed by, inherent in, or obvious in light of one or more of the '872-459 References or at a minimum that a reasonable examiner would have wanted to review the '872-459 References to make his own determination on that point.

p. Additionally, and for the same reasons, at least the assignee of the '459 Patent and prosecution counsel were aware of the materiality of the '872 ISR to the '459 prosecution.

q. None of the co-pendency of the '872 Application and the '872 PCT, the '872 EP, nor the October 26, 1993 Rejection and the '872-459 References were disclosed in the '459 Prosecution.

r. On information and belief, the '872 Application, the '872 PCT, the '872 EP, the October 26, 1993 Rejection, and the '872-459 References were therefore concealed from the examiner in the '459 Prosecution by a deliberate decision, with knowledge of the materiality of those references and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '752 Patent and PCT Applications

s. The Patentee committed further acts of inequitable conduct during the prosecution of the '459 Patent by additionally failing to disclose the applications, rejections, and references related to the U.S. Patent 5,319,752 (the '752 Patent).

t. Application No. 07/947,773 (the '752 Application), which ultimately led to the '752 Patent, was filed on September 18, 1992 by the same counsel on behalf of two of the same named inventors (Brian Peterson and Lai-Chin Lo) and the same assignee as the '459 Application (the '752 Applicants).

u. PCT Application PCT/US1993/08866 (the '752 PCT) claims priority to the '752 Application (having substantially the same disclosure) and was filed on September 17, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and Lai-Chin Lo) and the same assignee as the '459 and '752 Applications.

v. The '459 Application was reviewed by a different examiner than the '752 Application and the '752 PCT.

w. The '459 and '752 Patents' disclosures overlap to a significant extent. For example, the '752 Patent discloses a network adapter including "threshold logic for generating an early receive indication signal when a portion of [a] data frame is received," the very invention claimed in several claims of the '459 Patent.

x. The '752 Application states that it is related to the co-pending '459 Application, but no mention of the '752 Application is made in the '459 Application.

y. On January 26, 1993 and July 15, 1993, the '752 examiner issued rejections (the '752 Rejections) of the '752 Application.

z. At least the following references were reviewed by the '752 examiner and were material to, but not disclosed during, prosecution of the '459 Patent: U.S. Patents 4,546,467 (Yamamoto); 4,680,581 (Kozlik); 4,866,666 (Francisco); 5,101,402 (Chiu); and 5,103,446 (Fischer) (collectively the '752 References).

aa. All of these references relate to the limitations of the '459 claims that call for generating a signal. Fischer relates to the limitations of the '459 claims that call for an indication signal and an interrupt signal. Yamamoto, Kozlik, and Fischer relate to the limitations of the '459 claims that call for a buffer memory. Yamamoto, Kozlik and Chiu relate to the limitations of the '459 claims that call for network interface logic. Kozlik, Chiu, and Fischer relate to the limitations of the '459 claims that call for transferring a data frame. Francisco relates to the limitations of the '459 claims that call for an alterable storage location containing a threshold value. Chiu relates to the limitations of the '459 claims that call for a counter for counting the amount of data transferred.

bb. While the '459 prosecution was pending, three of the '752 References (Yamamoto, Kozlik, and Fischer) were cited again to at least the assignee and prosecution counsel of the '752 Application in the December 27, 1993 '752 PCT International Search Report (the '752 ISR).

cc. The '752 References would have been material because the features of the claims of the '459 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

dd. All of '752 Applicants had a duty of candor in the prosecution that led to the '459 Patent.

ee. All of the participants in the '752 prosecution knew of facts sufficient to establish the materiality to the '459 prosecution of the co-pendency of the '752 Application. At least the '752 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '459 prosecution of (i) the copendency of the '752 PCT, and (ii) the '752 Rejections, the '752 ISR, and the '752 References. That is, they knew of the similarity in disclosure between the '459 and '752 Patents' disclosures, and they knew that the '752 examiner had found the '752 References relevant to the '752 Application and the '752 PCT, and had twice rejected the '752 Application.

ff. However, neither the co-pendency of the '752 Application or the '752 PCT, nor the '752 Rejections, the '752 ISR, or the '752 References were disclosed in the '459 Prosecution.

gg. On information and belief, the '752 Application, the '752 PCT, the '752 Rejections, and the '752 References were therefore concealed from the examiner in the '459 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '406 Patent and PCT Applications

hh. The Patentee committed further acts of inequitable conduct during the prosecution of the '459 Patent by failing to disclose the applications, rejections, and references related to U.S. Patent 5,392,406 (the '406 Patent).

ii. Application No. 07/947,055 (the '406 Application), which ultimately led to the '406 Patent, was filed on September 18, 1992 by the same counsel on behalf of three of the same named inventors (Brian Peterson, Lai-Chin Lo, and David R. Brown) and the same assignee as the '459 Application (the '406 Applicants).

jj. PCT Application PCT/US1993/08840 (the '406 PCT) claims priority to the '406 Application (having substantially the same disclosure) and was filed on September 17, 1993 by the same counsel on behalf of three of the same named inventors (Brian Peterson, Lai-Chin Lo, and David R. Brown) and the same assignee as the '459 and '406 Applications.

kk. The '459 Application was reviewed by a different examiner than the '406 Application and the '406 PCT.

ll. The '459 and '406 Patents' disclosures overlap to a significant extent.

mm. On November 9, 1993 the '406 examiner issued a rejection (the '406 Rejection) of the '406 Application.

nn. At least the following references were reviewed by the '406 examiner and were material to, but not disclosed during, prosecution of the '459 Patent: U.S. Patents 4,447,878 (Kinnie); 4,672,570 (Benken); 4,959,779 (Weber); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); 5,179,671 (Kelly); and 5,185,876 (Nguyen) (collectively the '406-459 References).

oo. All of these references relate to the limitations of the '459 Patent that call for generating a signal. Benken, Kinoshita, and Pleva relate to the limitations of the '459 Patent that call for an indication signal. Benken, Brooks, Kinoshita, Pleva, and Nguyen relate to the limitations of the '459 Patent that call for an interrupt signal. Kinnie, Benken, Chisholm, Brooks, Kinoshita, Vo, and Nguyen relate to the limitations of the '459 Patent that call for a buffer memory. Benken and Brooks relate to the limitations of the '459 Patent that call for transferring a data frame. Benken and Pleva relate to the limitations of the '459 Patent that call for a network interface logic. Benken relates to the limitations of the '459 Patent that call for transfer descriptors.

pp. All of the '406-459 References reviewed by the '406 examiner were therefore material to the '459 Application, but none of them were disclosed by the '459 Applicants during prosecution of the '459 Patent.

qq. While the '459 prosecution was ongoing, all ten of the '406-459 References were cited again to at least the assignee and prosecution counsel of the '406 Application in the January 11, 1994 '406 PCT International Search Report (the '406 ISR). These references were considered by the searching authority as relevant and/or invalidating.

rr. The '406-459 References would have been material because the features of the claims of the '459 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

ss. All of the persons who were participants in the prosecutions of the '406 Patent had a duty of candor in the prosecution that led to the '459 Patent. At least the '406 assignee and prosecution counsel were participants in the prosecutions of the '406 PCT and were persons with a duty of candor in the prosecution that led to the '459 Patent.

tt. The '406 Applicants knew of facts sufficient to establish the materiality to the '459 prosecution of the co-pendency of the '406 Application and '406 PCT. At least the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality of the November 9, 1993 Rejection, the '406 ISR, and the '406-459 References. That is, all of the '406 Applicants knew of the similarity in disclosure between the '459 and '406 disclosures, and at least the '406 assignee and prosecution counsel knew that the '406 examiner had found the '406-459 References relevant to the '406 Application and the '406 PCT, and had rejected the '406 Application.

uu. However, the co-pendency of the '406 Application and the '406 PCT, the November 9, 1993 Rejection, the '406 ISR, and the '406-459 References were not disclosed in the '459 Prosecution.

vv. On information and belief, the '406 Application, the '406 PCT, the November 9, 1993 Rejection, and the '406-459 References were therefore concealed from the examiner in the '459 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '874 Patent and PCT Applications

ww. The Patentee committed further inequitable conduct during the prosecution of the '459 Patent by failing to disclose the applications related to the U.S. Patent 5,530,874 (the '874 Patent).

xx. Application No. 08/012,561 (the '874 Application), which ultimately led to the '874 Patent was filed on February 2, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '459 Application (the '874 assignee, prosecution counsel, Sherer, and Peterson are referred to herein as the '874 Applicants.)

yy. PCT Application PCT/US1993/12652 (the '874 PCT) claims priority to the '874 Application (having substantially the same disclosure) and was filed on December 28, 1993 by the same counsel on behalf of the two same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '874 Application and '459 Application.

zz. The '459 Application was reviewed by a different examiner than the '874 Application and the '874 PCT.

aaa. The '459 and '874 Patents' disclosures overlap to a significant extent.

bbb. The '874 Application states that it is related to the co-pending '459 Application, but no mention of the '874 Patent is made in the '459 Application.

ccc. All of the '874 Applicants were participants in the prosecution of the '874 Patent and were persons with a duty of candor in the prosecution that led to the '459 Patent. At least the '459 assignee and prosecution counsel were participants in the prosecutions of the '874 PCT and were persons with a duty of candor in the prosecution that led to the '459 Patent.

ddd. The '874 Applicants knew of facts sufficient to establish the materiality to the '459 prosecution of the co-pendency of the '874 Application and the '874 PCT. That is, they knew of the similarity in disclosure between the '459 and '874 disclosures.

eee. However, neither the co-pendency of the '874 Application nor of the '874 PCT, were disclosed in the '459 Prosecution.

fff. On information and belief, the co-pendency of the '874 Application and the '874 PCT were therefore concealed by the '874 Applicants from the examiner in the '459 prosecution with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '627 Patent and PCT Applications

ggg. The Patentee committed further inequitable conduct during the prosecution of the '459 Patent by failing to disclose the applications, rejections, and references related to U.S. Patent 5,517,627 (the '627 Patent).

hhh. Application No. 08/113,417 (the '627 Application), which ultimately led to the '627 Patent was a continuation-in-part application of the '406 Patent and was filed on Aug

27, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '872 Application (collectively the '627 Applicants).

iii. The '459 Application was reviewed by a different examiner than the '627 Application.

jjj. The '459 and '627 Patents' disclosures overlap to a significant extent.

kkk. All of the participants in the prosecutions of the '627 Patent were persons with a duty of candor in the prosecution that led to the '459 Patent.

lll. The '627 Applicants knew of facts sufficient to establish the materiality to the '459 prosecution of the co-pendency of the '627 Application. That is, they knew of the similarity in disclosure between the '459 and '627 disclosures.

mmm. On February 7, 1994, the '627 Applicants filed an Information Disclosure citing, *inter alia*, the following references: U.S. Patents 4,447,878 (Kinnie); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); and 5,185,876 (Nguyen) (collectively the '627-459 References). As detailed above, the '627-459 References relate to the limitations of the '459 Patent and would have been material. In fact, their citation in the February 7, 1994 IDS represents no less than the third time they were cited in a related application prior to the issuance of the '459 Patent.

nnn. All of the persons who were participants in the prosecutions of the '627 Patent had a duty of candor in the prosecution that led to the '459 Patent.

ooo. The '627 Applicants knew of facts sufficient to establish the materiality to the '459 prosecution of the co-pendency of the '627 Application. At least the '627 assignee and prosecution counsel knew of facts sufficient to establish the materiality of the '627-459 References. That is, all of the '627 Applicants knew of the similarity in disclosure between the

‘459 and ‘627 disclosures, and at least the ‘627 assignee and prosecution counsel knew that the ‘627-459 References had been cited in the ‘627 Application.

ppp. However, the co-pendency of the ‘627 Application and the ‘627-459 References were not disclosed in the ‘459 Prosecution.

qqq. On information and belief, the ‘627 Application and the ‘627-459 References were therefore concealed from the examiner in the ‘459 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The ‘313 Patent, PCT, and EP Applications

rrr. The Patentee committed inequitable conduct during the prosecution of the ‘459 Patent by failing to disclose the applications, rejections, and references related to the ‘313 Patent.

sss. Application No. 07/921,519 (the ‘313 Application), which ultimately led to the ‘313 Patent, was filed on the same date by the same counsel on behalf of the same named inventors (Peterson, Sherer, Brown, and Lo) and the same assignee as the ‘459 Application (collectively, the ‘313 Applicants).

ttt. PCT Application PCT/US1993/07027 (the ‘313 PCT) claims priority to the ‘313 Application (having substantially the same disclosure) and was filed on July 27, 1993, by the same counsel on behalf of the same named inventors (Peterson, Brown, Sherer, and Lo) and the same assignee as the ‘459 Application. The European Patent Application EP0606462 (the ‘313 EP), based on the ‘313 PCT, was filed on February 25, 1994, and lists all four of the named inventors listed in the ‘459 Application.

uuu. The '459 Application was reviewed by a different examiner than the '313 PCT and the '313 EP. Although the '459 Application was reviewed by the same examiner as the '313 Application, the Federal Circuit has held that the duty to cross-cite material information between related applications still holds in such situations. *See e.g., McKesson Info. Solutions, Inc. v. Bridge Med., Inc.*, 487 F.3d 897, 925 (Fed. Cir. 2007).

vvv. On September 21, 1993, the '313 Application received a Notice of Allowance in which the examiner cited U.S. Patent No. 4,672,570 (Benken).

www. Although the '459 Applicants cited the copendency of the '313 Application upon the filing of the '459 Application on July 28, 1992, the '459 Applicants did not disclose to the examiner of the '459 Application either the September 21, 1993 Allowance or the Benken reference.

xxx. The '459 and '313 Patents' disclosures overlap to a significant extent, as evidenced by the '459 Applicants' disclosure of the '313 Application as a related copending application.

yyy. The Benken reference was material to, but not disclosed during, prosecution of the '459 Application. The Benken reference discloses various limitations of the claims of the '459 Application, such as a buffer memory, network interface logic, host interface logic, transfer descriptor logic, and upload logic.

zzz. On November 26, 1993, during the prosecution of the '459 Patent, the following references were cited in the '313 International Search Report (the '313 ISR): U.S. Patents 4,672,570 (Benken); 4,471,427 (Harris), 4,604,682 (Schwan), and 5,121,390 (Farrell) (collectively the '313 ISR References).

aaaa. The '313 ISR References were material to, but not disclosed during, the prosecution of the '459 Application. The '313 ISR References relate to the limitations of the '459 Patent. For example, Harris relates to the limitations of the '459 Patent that call for a buffer memory, generating a signal, generating an interrupt, and network interface logic. Schwan relates to the limitations of the '459 Patent that call for a buffer memory, generating a preemptive signal, and interrupt signals. Farrell relates to the limitations of the '459 Patent that call for a buffer memory, network interface logic, generating a signal, and an interrupt signal.

bbbb. All of the '313 Applicants were participants in the prosecution of the '313 Patent and were persons with a duty of candor in the prosecution that led to the '459 Patent.

cccc. The '313 Applicants knew of the materiality to the '459 prosecution of (i) the Benken reference, (ii) the co-pendency of the '313 PCT and '313 EP Applications, (iii) the '313 ISR, and (iv) the '313 ISR References, yet failed to disclose any of these actions or references in the '459 Prosecution.

dddd. On information and belief, the (i) Benken reference, (ii) co-pendency of the '313 PCT and '313 EP Applications, (iii) '313 ISR, and (iv) '313 ISR References were therefore concealed from the examiner in the '459 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '782 Patent Application

eeee. The Patentee committed further inequitable conduct during the prosecution of the '459 Patent by failing to disclose the application, rejection, and references related to U.S. Patent 5,412,782 (the '782 Patent).

ffff. Application No. 07/907,946 (the ‘782 Application), which ultimately led to the ‘782 Patent was filed on July 2, 1992, by prosecution attorney Eric H. Willgoths of Townsend and Townsend on behalf of one of the same named inventors (Paul W. Sherer) and the same assignee as the ‘872 Application (Sherer and the assignee collectively referred to as the ‘782 Applicants).

gggg. The ‘459 Application was reviewed by a different examiner than the ‘782 Application.

hhhh. The ‘459 and ‘782 Patents’ disclosures relate to substantially the same subject matter. For example, the ‘782 Patent discloses “adjusting the TX start threshold to an amount larger than the packet, so transmission will not begin until the packet is completely copied into the adapter” and that “the adapter may be programmed to generate early receive interrupts when only a portion of a packet has been received from the network, so as to decrease latency.” These disclosures directly relate to the heart of the alleged invention claimed in the ‘459 Patent.

iiii. U.S. Patent 4,768,190 (Giancarlo), cited by the ‘782 Examiner in the January 14, 1994 Office Action Rejection, was material to, but not disclosed during, prosecution of the ‘459 Patent.

jjjj. Giancarlo relates to the limitations of the ‘459 Patent that call for generating a signal, an interrupt signal, a buffer memory, and/or transferring a data frame.

kkkk. All of the ‘782 Applicants were participants in the prosecution of the ‘782 Patent and were persons with a duty of candor in the prosecution that led to the ‘459 Patent.

llll. The ‘782 Applicants knew of facts sufficient to establish the materiality to the ‘459 prosecution of the copendency of the ‘782 Application. At least the ‘782 assignee knew

of facts sufficient to establish the materiality of the Giancarlo reference and the January 14, 1994 Rejection. That is, all of the '782 Applicants knew of the similarity in disclosure between the '459 and '782 disclosures, and at least the '782 assignee knew that the Giancarlo reference had been cited in the '782 Application.

mmmm. However, the copendency of the '782 Application and the Giancarlo reference were not disclosed in the '459 Prosecution.

nnnn. On information and belief, the '782 Application and the Giancarlo reference were therefore concealed from the examiner in the '459 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

Intel 82586 local area network coprocessor

oooo. The Intel 82586 local area network coprocessor and the documentation describing it ("the Intel 82586") is material prior art, as defined by 37 C.F.R. § 1.56(b), because, on information and belief, the Intel 82586 and the documentation describing it separately and collectively invalidates all of the asserted claims in the '459 patent. Accordingly, a reasonable examiner would have found that the Intel 82586 and the documentation describing it, alone or in combination with other information, was material to the prosecution of the '459 Patent, because, at a minimum, it established a prima facie case of unpatentability for all claims in the '459 patent.

pppp. Further, the Intel 82586 was known by the inventors, their counsel, and 3Com (collectively "Applicants") to be prior art material to the application that led to the '459 Patent, because the Intel 82586 is described as relevant prior art in the Background of the Invention section of the '459 Application.

qqqq. On information and belief, some or all of Applicants had full knowledge of the operation and features of the Intel 82586, because they were able to summarize certain aspects of the operations and features of the Intel 82586 in the Background section of the '459 Patent.

rrrr. The prosecution history of the '459 Patent demonstrates that Applicants withheld the source of their information concerning the operation and functionality of the Intel 82586 from the PTO during the filing and prosecution of the '459 Application because only very limited disclosure was made of the Intel 82586 chip in the background of the '459 Patent and no documentation describing its features or functionality was provided to the PTO, despite the fact that the chip and its documentation must have been known to some or all of Applicants in order to provide the information set forth in the Background section of the '459 Patent.

ssss. On information and belief, the documentation for the Intel 82586 would have disclosed that Applicants' description of the functionality and operation of that chip to the PTO was incomplete and misleading and that, in fact, the chip and its documentation invalidated at least all of the asserted claims of the '459 Patent.

tttt. A reasonable examiner also would have found that the Applicants' description of the Intel 82586 and Applicants' assertions of patentability for the '459 Application were inconsistent with, and refuted by, the features and operation of the Intel 82586 and that the documentation demonstrating these inconsistencies, but withheld by some or all of Applicants, was not cumulative to information in the prosecution record, including cited references and documented communications between the Applicants and PTO.

uuuu. The prosecution history of the '459 Patent therefore demonstrates that the Applicants who were knowledgeable about the features and operation of the Intel 82586 chip

misrepresented and knowingly and intentionally concealed material information regarding the state of the prior art, and specifically the features and operation of the Intel 82586.

vvvv. The Applicants obtained allowance of claims then pending in the '459 Application as a result of not fully disclosing the Intel 82586 and withholding documentation concerning its features and functionality, by misrepresenting the true state of the prior art, and by misrepresenting how the Intel 82586 operated.

www. The '459 patent is therefore unenforceable due to inequitable conduct.

xxxx. There is a substantial likelihood that a reasonable examiner would have considered the above-identified references, co-pending applications, and rejections important in deciding whether to allow the '459 patent to issue. In particular, the examiner would not have allowed at least claims 1 and 22 with knowledge of the above-identified references, co-pending applications, and rejections.

yyyy. On information and belief, none of the above identified references that were not cited during the prosecution of the '459 Patent, despite a duty to do so, were cumulative to the prior art made of record during the prosecution of the '459 Patent. In fact, only three prior art references were cited during the entire prosecution of the '459 Patent - namely, U.S. Patents 4,852,088 (Gulick 1), 4,907,225 (Gulick 2), and 5,101,477 (Casper). These references were cited by the '459 examiner in the October 14, 1993 Notice of Allowance without any analysis as to which claim limitations they disclosed. Thus, neither the applicants nor the prosecuting attorney could reasonably have believed that any of the above identified references were cumulative, since no claim analysis existed in the record of the '459 Patent prosecution.

72. In defense to Plaintiff's allegations that Brother has infringed the '313 Patent, Brother alleges that the '313 Patent is unenforceable by reason of inequitable conduct committed during the prosecution of that patent as follows:

a. Application No. 07/921,519 (the '313 Application) which ultimately led to the '313 Patent, was filed on July 28, 1992 on behalf of named inventors Brian Peterson, W. Paul Sherer, David R. Brown, and Lai-Chin Lo, and named assignee, 3Com Corporation. Mark Haynes of Fleisler, Dubb, Meyer & Lovejoy was identified as counsel for the applicants and the assignee.

The '872 Patent, PCT, and EP Applications

b. The Patentee committed inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications, rejection, and references related to the '872 Patent.

c. The '872 Application that ultimately led to the '872 Patent was filed on the same date by the same counsel on behalf of two of the same named inventors (Peterson and Brown) and the same assignee as the '313 Application.

d. Ultimately, a third of the '313 named inventors (Sherer) was added as a named inventor on what became the '872 Patent.

e. The '872 PCT claims priority to the '872 Application (having substantially the same disclosure) and was filed on July 27, 1993 by the same counsel on behalf of two of the same named inventors (Peterson and Brown) and the same assignee as the '313 Application. The '872 EP based on the '872 PCT was filed on February 25, 1994.

f. In the '872 Application, the patentee disclosed, as required, that the '872 Application was related to the co-pending '313 Application. Accordingly, upon information and

belief, the patentee had knowledge of the important relationship between these co-pending applications.

g. Despite this knowledge, the patentee did not disclose the co-pending '872 Application to the '313 examiner—a disclosure that would have surely borne on patentability of the substantively similar '313 Patent.

h. The '313 Application was reviewed by a different examiner than the '872 Application, the '872 PCT, and the '872 EP.

i. The '313 and '872 Patents' disclosures overlap to a significant extent.

j. The '872 Application states that it is related to the co-pending '313 Application, but no mention of the '872 Application is made in the '313 Application.

k. On October 26, 1993 the '872 examiner issued a rejection of the '872 Application.

l. In his Notice of Allowability of September 21, 1993, the examiner of the '313 Patent stated that the pending claims were being allowed because:

The prior art does not show or render obvious, inter alia, the network interface controller for a host system/network transceiver in which a host system includes a host address space, and a buffer memory is located outside of the address space and further in which the interface manages data transfer between the host address space and the buffer memory in an operational manner transparent to the host system.

m. In his consideration of the Notice of Allowability, the '313 examiner cited only one reference: U.S. Patent 4,672,570 (Benken).

n. At least the following references were reviewed by the '872 examiner and were material to, but not disclosed during, prosecution of the '313 Patent: U.S. Patents 5,043,981 (Firoozmand et al.), 4,860,193 (Bentley), 4,258,418 (Heath), 4,715,030 (Koch), 5,195,093 (Tarrab), and, 5,210,749 (Firoozmand) (collectively, the '872-313 References).

o. In particular, these references relate to managing data transfers and a buffer memory. Firoozmand et al. and Koch relate to a network interface means. Firoozmand et al., Tarrab, and Firoozmand relate to a buffer memory outside of the host address space.

p. These references would have been material because the features of the claims of the '313 application were disclosed by, inherent in, or obvious in light of one or more of these references.

q. On October 26, 1993, prior to the issuance of the '313 patent, the Examiner for the '872 Application mailed an Office Action to 3Com's prosecution counsel, Mark A. Haynes. In the Office Action, the Examiner relied on Firoozmand et al. as a basis for a §102(a) anticipation rejection. The Examiner also relied on various combinations of the Firoozmand et al., Firoozmand, Heath, Koch, and Tarrab references as bases for obviousness-type rejections of certain claims pending in the '872 Application. In a Notice of References Cited, included with the October 26, 1993 Office Action, the Examiner made of record the Bentley reference. In an Office Action dated July 6, 1994, the Examiner for the '872 Application relied on Bentley as a basis for an obviousness-type rejection of certain pending claims.

r. The '872-313 References are material to the '313 patent. Each of these references discloses elements of the alleged inventions claimed by the '313 patent. At least the Firoozmand et al. and Firoozmand references fully anticipate (i.e., establish a prima facie case of invalidity of) certain claims of the '313 patent. The '872-313 References were later deemed

sufficiently material to include in an Information Disclosure Statement (IDS) during later prosecution of the '094 Patent (another related patent-in-suit) on August 18, 1995.

s. On information and belief, the '872-313 References are not cumulative to the prior art made of record during the prosecution of the '313 patent. On information and belief, there is a substantial likelihood that a reasonable examiner would have considered those references important in deciding whether to allow the '313 patent to issue.

t. Because the prosecuting attorney, Mark A. Haynes, had prosecuted both the '313 patent and the '872 patent, Mr. Haynes was aware of all of the '872-313 References. Moreover, David R. Brown and Brian Petersen, named inventors on the '313 patent and the '872 patent, were aware of at least the Firoozmand et al. patent prior to the issuance of the '313 patent. On or about March 2, 1994, both Mr. Brown and Mr. Petersen filed a declaration during the prosecution of the '872 patent in which they declared as follows:

We have been informed that claims 1, 3, 6 and 11 in the above identified U.S. Patent Application have been rejected under 35 U.S.C. §102(a) as being anticipated by Firoozmand, et al. U.S. Patent No. 5,043,981 which was issued August 27, 1991 and filed May 29, 1990 (the effective date of the reference"). ('893 Application, § 1.131 Declaration, p. 1).

u. On information and belief, one or more of the inventors named on the face of the '313 patent (including David R. Brown and Brian Petersen), the attorney(s) who prosecuted the '313 patent (including Mark A. Haynes), and others substantively involved in the prosecution of the '313 patent (collectively the "3Com Prosecuting Agents") were made aware of, and received copies of, the '872-313 References prior to the issuance of the '313 patent.

v. Even more, during the prosecution of the '313 Patent, five of the '872-313 References (Firoozmand et al., Firoozmand, Koch, Heath, and Tarrab) were cited again to at least the assignee and prosecution counsel of the '872 Application in the December 7, 1993 '872 PCT International Search Report (the '872 ISR). These references were identified by the searching authority as of "particular relevance," rendering the claimed invention anticipated or obvious.

w. All of the '872 Applicants were participants in the prosecutions of each the '872 Patent, and were persons with a duty of candor in the prosecution that led to the '313 Patent.

x. For the same reasons stated above, at least the assignee of the '313 Patent and prosecution counsel were aware of the materiality of the '872 PCT, '872 EP, and the '872 ISR to the '313 prosecution.

y. None of the co-pendency of the '872 Application and the '872 PCT, and the '872 EP, nor the October 26, 1993 Rejection and the '872-313 References were disclosed in the '313 Prosecution.

z. On information and belief, the '872 Application, the '872 PCT, the '872 EP, the October 26, 1993 Rejection, and the '872-313 References were therefore concealed from the examiner in the '313 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '752 Patent and PCT Applications

aa. The Patentee committed further acts of inequitable conduct during the prosecution of the '313 Patent by additionally failing to disclose the applications, rejections, and references related to the U.S. Patent 5,319,752 (the '752 Patent).

bb. The '752 Application, which ultimately led to the '752 Patent, was filed on September 18, 1992 by the same counsel on behalf of two of the same named inventors (Brian Peterson and Lai-Chin Lo) and the same assignee as the '313 Application. (The '752 Applicants.).

cc. The '752 PCT claims priority to the '752 Application (having substantially the same disclosure) and was filed on September 17, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and Lai-Chin Lo) and the same assignee as the '313 and '752 Applications.

dd. The '313 Application was reviewed by a different examiner than the '752 Application, and the '752 PCT.

ee. The '313 and '752 Patents' disclosures overlap to a significant extent.

ff. On January 26, 1993 and July 15, 1993, the '752 examiner issued rejections (the '752 Rejections) of the '752 Application.

gg. At least the following references were reviewed by the '752 examiner and were material to, but not disclosed during, prosecution of the '313 Patent: U.S. Patents 4,546,467 (Yamamoto); 4,680,581 (Kozlik); 4,866,666 (Francisco); 5,101,402 (Chiu); and 5,103,446 (Fischer) (collectively the '752 References).

hh. The '752 References relate to the limitations of the '313 Patent. For example, these references relate to a buffer memory and a network interface means. Fischer, in

particular, relates to a buffer memory outside of the host address space and sharing the host address space with the host.

ii. During the prosecution of the '313 Patent, three of the '752 References (Yamamoto, Kozlik, and Fischer) were cited again to at least the assignee and prosecution counsel of the '752 Application in the December 27, 1993 '752 PCT International Search Report (the '752 ISR).

jj. The '752 References would have been material because the features of the claims of the '313 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

kk. All of the '752 Applicants had a duty of candor in the prosecution that led to the '313 Patent.

ll. All of the participants in the '752 prosecution knew of facts sufficient to establish the materiality to the '313 prosecution of the co-pendency of the '752 Application and '752 PCT. At least the '752 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '313 prosecution of the '752 Rejections, the '752 ISR, and the '752 References. That is, they knew of the similarity in disclosure between the '313 and '752 Patents' disclosures, and they knew that the '752 examiner had found the '752 References relevant to the '752 Application and the '752 PCT, and had twice rejected the '752 Application.

mm. However, neither the co-pendency of the '752 Application and the '752 PCT, nor the '752 Rejections, the '752 ISR, and the '752 References were disclosed in the '313 Prosecution.

nn. On information and belief, the '752 Application, the '752 PCT, the '752 Rejections, and the '752 References were therefore concealed from the examiner in the '313

Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '406 Patent and PCT Applications

oo. The Patentee committed further acts of inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications, rejection, and references related to the '406 Patent.

pp. The '406 Application, which ultimately led to the '406 Patent was filed on September 18, 1992 by the same counsel on behalf of three of the same named inventors (Brian Peterson, Lai-Chin Lo, and David R. Brown) and the same assignee as the '313 Application. (The '406 Applicants).

qq. The '406 PCT claims priority to the '406 Application (having substantially the same disclosure) and was filed on September 17, 1993 by the same counsel on behalf of three of the same named inventors (Brian Peterson, Lai-Chin Lo, and David R. Brown) and the same assignee as the '313 and '406 Applications.

rr. The '313 Application was reviewed by a different examiner than the '406 Application and the '406 PCT.

ss. The '313 and '406 Patents' disclosures overlap to a significant extent.

tt. The '406 Application states that it was related to the application of the '313 Patent, but no mention of the '406 Patent is made in the '313 Application.

uu. On November 9, 1993 the '406 examiner issued a rejection of the '406 Application.

vv. At least the following references were reviewed by the '406 examiner and were material to, but not disclosed during prosecution of the '313 Patent: U.S. Patents 4,447,878

(Kinnie); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); and 5,185,876 (Nguyen) (collectively the '406-313 References).

ww. These references relate to the limitations of the '313 Patent. Kinnie, Chisholm, Brooks, Kinoshita, Vo, Pleva, and Nguyen relate to the limitations of the '313 Patent that call for a buffer memory. Pleva relates to the limitations of the '313 Patent that call for a network interface device.

xx. All of the '406-313 References reviewed by the '406 examiner were therefore material to the '313 Application, but none of them were disclosed during prosecution of the '313 Patent.

yy. While the '313 prosecution was ongoing, all of the '406-313 References were cited again to the to at least the assignee and prosecution counsel of the '406 Application in the January 11, 1994 '406 PCT International Search Report (the '406 ISR). These references were considered by the searching authority as relevant and/or invalidating.

zz. The '406-313 References would have been material because the features of the claims of the '313 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

aaa. All of the persons who were participants in the prosecutions of the '406 Patent and '406 PCT had a duty of candor in the prosecution that led to the '313 Patent.

bbb. The '406 Applicants knew of facts sufficient to establish the materiality to the '313 prosecution of the co-pendency of the '406 Application and '406 PCT. At least the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality of the November 9, 1993 Rejection, the '406 ISR, and the '406-313 References. That is, all of the '406 Applicants knew of the similarity in disclosure between the '313 and '406 disclosures, and at

least the '406 assignee and prosecution counsel knew that the '406 examiner had found the '406-313 References relevant to the '406 Application and the '406 PCT, and had rejected the '406 Application.

ccc. However, the co-pendency of the '406 Application and the '406 PCT, the November 9, 1993 Rejection, the '406 ISR, and the '406-313 References were not disclosed in the '313 Prosecution.

ddd. On information and belief, the '406 Application, the '406 PCT, the November 9, 1993 Rejection, and the '406-313 References were therefore concealed from the examiner in the '313 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '874 Patent and PCT Applications

eee. The Patentee committed further inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications related to the '874 Patent.

fff. The '874 Application, which ultimately led to the '874 Patent was filed on February 2, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '313 Application (the '874 Applicants).

ggg. The '874 PCT claims priority to the '874 Application (having substantially the same disclosure) and was filed on December 28, 1993 by the same counsel on behalf the same named inventors and the same assignee as the '874 Application.

hhh. The '313 Application was reviewed by a different examiner than the '874 Application and the '874 PCT.

iii. The '313 and '874 Patents' disclosures overlap to a significant extent.

jjj. All of the participants in the prosecutions of the '874 Patent and '874 PCT were persons with a duty of candor in the prosecution that led to the '313 Patent.

kkk. The '874 Applicants knew of facts sufficient to establish the materiality to the '313 prosecution of the co-pendency of the '874 Application and the '874 PCT. That is, they knew of the similarity in disclosure between the '313 and '874 disclosures. For example, the '874 Application discloses a network adapter buffer memory, host interface logic, and network interface logic.

lll. However, neither the co-pendency of the '874 Application nor of the '874 PCT, were disclosed in the '313 Prosecution.

mmm. On information and belief, the co-pendency of the '874 Application and the '874 PCT were therefore concealed by the '874 Applicants from the examiner in the '313 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '627 Patent and PCT Applications

nnn. The Patentee committed further inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications, rejections, and references related to U.S. Patent 5,517,627 (the '627 Patent).

ooo. Application No. 08/113,417 (the '627 Application), which ultimately led to the '627 Patent was a continuation-in-part application of the '406 Patent and was filed on Aug 27, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '872 Application (collectively the '627 Applicants).

ppp. The '313 Application was reviewed by a different examiner than the '627 Application.

qqq. The '313 and '627 Patents' disclosures overlap to a significant extent.

rrr. The '406 Application, of which the '627 Patent is a continuation-in-part, states that it is related to the copending '313 Application, but no mention of the '627 Application is made in the '313 Application.

sss. On February 7, 1994, the '627 Applicants filed an Information Disclosure citing, inter alia, the following references: U.S. Patents 4,447,878 (Kinnie); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); and 5,185,876 (Nguyen) (collectively the '627-313 References). As detailed above, the '627-313 References relate to the limitations of the '313 Patent and would have been material. In fact, their citation in the February 7, 1994 IDS represents no less than the third time they were cited in a related application prior to the issuance of the '313 Patent.

ttt. All of the persons who were participants in the prosecutions of the '627 Patent had a duty of candor in the prosecution that led to the '313 Patent.

uuu. The '627 Applicants knew of facts sufficient to establish the materiality to the '313 prosecution of the co-pendency of the '627 Application. At least the '627 assignee and prosecution counsel knew of facts sufficient to establish the materiality of the '627-313 References. That is, all of the '627 Applicants knew of the similarity in disclosure between the '313 and '627 disclosures, and at least the '627 assignee and prosecution counsel knew that the '627-313 References had been cited in the '627 Application.

vvv. However, the co-pendency of the '627 Application and the '627-313 References were not disclosed in the '313 Prosecution.

www. On information and belief, the '627 Application and the '627-313 References were therefore concealed from the examiner in the '313 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '459 Patent, PCT, and EP Applications

xxx. The Patentee committed inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications, rejections, and references related to the '459 Patent.

yyy. The '459 Application which ultimately led to the '459 Patent, was filed on the same date by the same counsel on behalf of the same inventors (Petersen, Brown, Sherer, and Lo) and the same named assignee as the '313 Application.

zzz. PCT Application PCT/US1993/07056 (the '459 PCT) was filed on July 27, 1993, and claims priority to the '459 Application by the same counsel on behalf of the same inventors (Petersen, Brown, Sherer, and Lo) and the same named assignee as the '313 Application and the '459 Application. The European Patent Application EP0607412 (the '459 EP) was filed on February 25, 1994 based on the '459 PCT.

aaaa. The '313 Application was reviewed by a different examiner than the '459 PCT and the '459 EP. Although the '313 Application was reviewed by the same examiner as the '459 Application, the Federal Circuit has held that the duty to cross-cite material references between related applications still holds in such situations. See e.g., McKesson Info. Solutions, Inc. v. Bridge Med., Inc., 487 F.3d 897, 925 (Fed. Cir. 2007).

bbbb. The '313 and '459 Patents' disclosures overlap to a significant extent.

cccc. During prosecution of the '459 Application, the following references were cited: U.S. Patents 4,852,088 (Gulick 1), 4,907,225 (Gulick 2), and 5,101,477 (Casper) (collectively the '459 References). These references were cited to the '313 Applicants in the Notice of Allowability of October 14, 1993 of the '459 Application.

dddd. All of the '459 References reviewed by the '459 examiner were material to, but not disclosed during prosecution of, the '313 Patent.

eeee. These references relate to the limitations of the '313 claims that call for a buffer memory, a network interface means, and a host interface means.

ffff. While the '313 prosecution was pending, the '459 References (Gulick 1, Gulick 2, and Casper) were cited again to at least the assignee and prosecution counsel of the '459 Application in the November 15, 1993 '459 International Search Report (the '459 ISR), but still were not disclosed in the '313 prosecution.

gggg. The '459 References would have been material because the features of the claims of the '313 Application were disclosed by, inherent in, or obvious in light of one or more of these references. The '313 Examiner would have, therefore, considered these references highly material.

hhhh. At least Petersen, Brown, Sherer, Lo, the '459 assignee, and prosecution counsel had a duty of candor in the prosecution that led to the '313 Patent.

iiii. At least Petersen, Brown, Sherer, Lo, the '459 assignee, and prosecution counsel knew of facts sufficient to establish the materiality to the '313 prosecution of the co-pendency of the '459 Application. At least the '459 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '313 prosecution of (i) the co-pendency of the '459 PCT and the '459 EP and (ii) the '459 ISR, and the '459 References. That is, at least

Petersen, Brown, Sherer, Lo, the '459 assignee, and prosecution counsel knew of the similarity in disclosure between the '459 and '313 Patents' disclosures, and at least the '459 assignee and prosecution counsel knew that the '459 examiner had found the '459 References relevant to the '459 Application and the '459 PCT.

jjjj. However, neither the co-pendency of the '459 Application, the '459 PCT, and the '459 EP, nor the '459 ISR and the '459 References were disclosed in the '313 Prosecution.

kkkk. On information and belief, the '459 Application, the '459 PCT, the '459 Rejections, and the '459 References were therefore concealed from the examiner in the '313 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '782 Patent

llll. The Patentee committed further inequitable conduct during the prosecution of the '313 Patent by failing to disclose the application, rejection, and references related to U.S. Patent 5,412,782 (the '782 Patent).

mmmm. Application No. 07/907,946 (the '782 Application), which ultimately led to the '782 Patent, was filed on July 2, 1992, by prosecution attorney Eric H. Willgohs of Townsend and Townsend on behalf of one of the same named inventors (Paul W. Sherer) and the same assignee as the '872 Application (Sherer and the assignee collectively referred to as the '782 Applicants).

nnnn. The '313 Application was reviewed by a different examiner than the '782 Application.

oooo. The ‘313 and ‘782 Patents’ disclosures relate to substantially the same subject matter. For example, the ‘782 Patent discloses that “incoming packets can be transferred directly into host memory”, which directly relates to the subject matter of the ‘313 Patent.

pppp. U.S. Patent 4,768,190 (Giancarlo), cited by the ‘782 Examiner in the January 14, 1994 Office Action Rejection, was material to, but not disclosed during, prosecution of the ‘459 Patent.

qqqq. Giancarlo relates to the limitations of the ‘313 Patent that call for a buffer memory, network interface means, and host interface means.

rrrr. All of the ‘782 Applicants were participants in the prosecution of the ‘782 Patent and were persons with a duty of candor in the prosecution that led to the ‘313 Patent.

ssss. The ‘782 Applicants knew of facts sufficient to establish the materiality to the ‘313 prosecution of the copendency of the ‘782 Application. At least the ‘782 assignee knew of facts sufficient to establish the materiality of the Giancarlo reference and the January 14, 1994 Rejection. That is, all of the ‘782 Applicants knew of the similarity in disclosure between the ‘313 and ‘782 disclosures, and at least the ‘782 assignee knew that the Giancarlo references had been cited in the ‘782 Application.

tttt. However, the copendency of the ‘782 Application, the January 14, 1994 Rejection, and the Giancarlo references were not disclosed in the ‘313 Prosecution.

uuuu. The ‘782 Application, the January 14, 1994 Rejection, and the Giancarlo references were therefore concealed from the examiner in the ‘313 prosecution by the ‘782 Applicants with knowledge of their materiality and, on information and belief, with intent to deceive, due to their high materiality and the lack of any apparent other reason for their non-disclosure. The ‘313 PCT and EP Applications

vvvv. The Patentee committed inequitable conduct during the prosecution of the '313 Patent by failing to disclose the applications and references related to the '313 PCT and '313 EP.

www. PCT Application PCT/US1993/07027 (the '313 PCT) claims priority to the '313 Application (having substantially the same disclosure) and was filed on July 27, 1993, by the same counsel on behalf of the same named inventors (Peterson, Brown, Sherer, and Lo) and the same assignee as the '313 Application. The European Patent Application EP0606462 (the '313 EP), based on the '313 PCT, was filed on February 25, 1994, and lists all four of the named inventors listed in the '313 Application.

xxxx. On information and belief, the '313 Application was reviewed by a different examiner than the '313 PCT and the '313 EP.

yyyy. The '313 PCT's and the '313 EP's disclosures overlap to a significant extent with the '313 Patent.

zzzz. On November 26, 1993, during the prosecution of the '313 Patent, the following references, inter alia, were cited in the '313 International Search Report (the '313 ISR): U.S. Patents 4,471,427 (Harris), 4,604,682 (Schwan), and 5,121,390 (Farrell) (collectively the '313 ISR References).

aaaaa. The '313 ISR References were material to, but not disclosed during, the prosecution of the '313 Application. The '313 ISR References relate to the limitations of the '313 Patent. For example, all of the '313 ISR References relate to the limitations of the '313 Patent that call for a buffer memory. Harris and Farrell relate to the limitations of the '313 Patent that call for network interface logic. Harris relates to the limitations of the '313 Patent that call for a shared memory space.

bbbb. The participants in the prosecution of the '313 PCT and EP Applications were persons with a duty of candor in the prosecution that led to the '313 Patent.

cccc. The '313 PCT and EP Applicants knew of the materiality to the '313 Application prosecution of (i) the co-pendency of the '313 PCT and '313 EP Applications, (ii) the '313 ISR, and (iii) the '313 ISR References, yet failed to disclose any of these actions or references in the prosecution of the '313 Patent.

dddd. On information and belief, the (i) co-pendency of the '313 PCT and '313 EP Applications, (ii) '313 ISR, and (iii) '313 ISR References were therefore concealed from the examiner in the '313 Patent prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

Intel 82586 local area network coprocessor

eeee. ffff. On information and belief, the Intel 82586 local area network coprocessor and the documentation describing it ("the Intel 82586") is material prior art, as defined by 37 C.F.R. § 1.56(b), because the Intel 82586 and the documentation describing it separately and collectively invalidates all of the asserted claims in the '313 patent. Accordingly, a reasonable examiner would have found that the Intel 82586 and the documentation describing it, alone or in combination with other information, was material to the prosecution of the '313 Patent, because, at a minimum, it established a prima facie case of unpatentability for all claims in the '313 patent.

ffff. Further, the Intel 82586 was known by the inventors, their counsel, and 3Com (collectively "Applicants") to be prior art material to the application that led to the '313

Patent, because the Intel 82586 is described as relevant prior art in the Background of the Invention section of the '313 Application.

ggggg. On information and belief, some or all of Applicants had full knowledge of the operation and features of the Intel 82586, because they were able to summarize certain aspects of the operations and features of the Intel 82586 in the Background section of the '313 Patent.

hhhhh. The prosecution history of the '313 Patent demonstrates that Applicants withheld the source of their information concerning the operation and functionality of the Intel 82586 from the PTO during the filing and prosecution of the '313 Application because only very limited disclosure was made of the Intel 82586 chip in the background of the '313 Patent and no documentation describing its features or functionality was provided to the PTO, despite the fact that the chip and its documentation must have been known to some or all of Applicants in order to provide the information set forth in the Background section of the '313 Patent.

iiii. On information and belief, the documentation for the Intel 82586 would have disclosed that Applicants' description of the functionality and operation of that chip to the PTO was incomplete and misleading and that, in fact, the chip and its documentation invalidated at least all of the asserted claims of the '313 Patent.

jjjjj. A reasonable examiner also would have found that the Applicants' description of the Intel 82586 and Applicants' assertions of patentability for the '313 Application were inconsistent with, and refuted by, the features and operation of the Intel 82586 and that the documentation demonstrating these inconsistencies, but withheld by some or all of Applicants, was not cumulative to information in the prosecution record, including cited references and documented communications between the Applicants and PTO.

kkkkk. The prosecution history of the '313 Patent therefore demonstrates that the Applicants who were knowledgeable about the features and operation of the Intel 82586 chip misrepresented and knowingly and intentionally concealed material information regarding the state of the prior art, and specifically the features and operation of the Intel 82586.

lllll. The Applicants obtained allowance of claims then pending in the '313 Application as a result of not fully disclosing the Intel 82586 and withholding documentation concerning its features and functionality, by misrepresenting the true state of the prior art, and by misrepresenting how the Intel 82586 operated.

mmmmm. The '313 patent is therefore unenforceable due to inequitable conduct.

nnnnn. There is a substantial likelihood that a reasonable examiner would have considered the above identified references, co-pending applications, and rejections important in deciding whether to allow the '313 Patent to issue. In particular, the examiner would not have allowed at least claim 1 with knowledge of the above-identified references, co-pending applications, and rejections.

ooooo. On information and belief, none of the above identified references that were not cited during the prosecution of the '313 Patent, despite a duty to do so, were cumulative to the prior art made of record during the prosecution of the '313 Patent. In fact, only one prior art reference was cited during the entire prosecution of the '313 Patent - namely, U.S. Patent No. 4,672,570 to Benken. Benken was cited by the '313 examiner in the September 21, 1993 Notice of Allowance without any analysis as to which claim limitations Benken disclosed. Thus, neither the applicants nor the prosecuting attorney could reasonably have believed that any of the above

identified references were cumulative, since no claim analysis existed in the record of the '313 Patent prosecution.

73. In defense to Plaintiff's allegations that Brother has infringed the '872 Patent, Brother alleges that the '872 Patent is unenforceable by reason of inequitable conduct committed during the prosecution of that patent as follows:

a. The '872 Application, which ultimately led to the '872 Patent, was filed on the same date by Mark. A Haynes on behalf of named inventor Brian Peterson and David R. Brown and named assignee 3Com Corporation as the '459 Application. Ultimately, a third inventor (W. Paul Sherer) was added as a named inventor on what became the '872 Patent.

The '459 Patent, PCT, and EP Applications

b. The Patentee committed inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to the '459 Patent.

c. The '459 Application which ultimately led to the '459 Patent, was filed on the same date by the same counsel on behalf of the same inventors (Petersen, Brown, and Sherer) and the same named assignee as the '872 Application.

d. PCT Application PCT/US1993/07056 (the '459 PCT) was filed on July 27, 1993, and claims priority to the '459 Application by the same counsel on behalf of the same inventors (Petersen, Brown, and Sherer) and the same named assignee as the '872 Application and the '459 Application. The European Patent Application EP0607412 (the '459 EP) was filed on February 25, 1994 based on the '459 PCT.

e. The '872 Application was reviewed by a different examiner than the '459 Application, the '459 PCT, and the '459 EP.

f. The '872 and '459 Patents' disclosures overlap to a significant extent.

g. During prosecution of the '459 Application, the following references were cited: U.S. Patents 4,852,088 (Gulick 1), 4,907,225 (Gulick 2), and 5,101,477 (Casper) (collectively the '459 References). These references were cited to the '872 Applicants in the Notice of Allowability of October 14, 1993 of the '459 Application.

h. All of the '459 References reviewed by the '459 examiner were material to, but not disclosed during prosecution of, the '872 Patent.

i. These references relate to the limitations of the '872 claims that call for supplying a signal. All references relate to the limitations of the '872 claims that call for a buffer memory. All references relate to the limitations of the '872 claims that call for a network interface means. All references relate to the limitations of the '872 claims that call for transferring data of frames. All references relate to the limitations of the '872 claims that call for a transmit logic. Gulick 1 and Gulick 2 relate to the limitations of the '872 claims that call for an underrun control logic. Finally, and perhaps most importantly, all references relate to the limitations of the '872 claims that call for *threshold determination* of an amount of data.

j. While the '872 prosecution was pending, the '459 References (Gulick 1, Gulick 2, and Casper) were cited again to at least the assignee and prosecution counsel of the '459 Application in the November 15, 1993 '459 International Search Report (the '459 ISR), but still were not disclosed in the '872 prosecution.

k. In the Response of February 23, 1994, during prosecution of the '872 Patent, at least the prosecution counsel of the '872 Application argued that:

In particular, the invention as recited in the new claims is limited to a CSMA/CD network adapter. This kind of network is

fundamentally different from the FDDI network of Firoozmand, et al. In the FDDI environment, no transmissions are initiated until the transmitting station receives the token from the network. Thus, Firoozmand, et al. will not begin transmitting a first frame while the transmitting station has the token, unless at least one entire frame is present in the transmit buffer. Firoozmand, et al. does not use the transmit threshold determination for a first frame in a transmission sequence. Rather, this threshold determination is only used in succeeding frames. See Firoozmand, et al. column 10, line 53-68. (emphasis added)

l. The '459 References would have been material because the features of the claims of the '872 Application were disclosed by, inherent in, or obvious in light of one or more of these references. For example, these references are related to using the threshold determination for any frame. The '872 Examiner would have, therefore, considered these references highly material because they could have been combined with Firoozmand et al. or other references cited during the '872 prosecution to make obvious the claims of the '872 Application directed to CSMA/CD.

m. Moreover, during prosecution of Application No. 08/715,253 (the '094 Application), the continuation of the '872 Application, the same examiner of both the '872 and '094 Applications discovered Gulick 1 on his own, considered it "pertinent to applicant's disclosure," and cited it in the Office Action of March 19, 1996 in the '094 prosecution. However, because Gulick 1 was never brought to his attention, the examiner did not have the opportunity to consider it prior to issuance of the '872, despite its high materiality.

n. During prosecution of the '459 EP, the following references, inter alia, were cited: "Early Interrupt for Disk Controller," IBM Technical Disclosure Bulletin, vol. 25, no. 9, February 1983, p. 4703 (IBM) and 5,179,709 (Bailey) (collectively the '459 EP References). These references were cited to the '872 Applicants in the April 27, 1994 Supplementary European Search Report ('459 EP SSR).

o. These references relate to the limitations of the '872 Patent. IBM relates to the limitations of the '872 Patent that call for an alterable threshold value. Bailey relates to the limitations of the '872 Patent that call for a buffer memory and means, coupled with the buffer memory, for monitoring the transferring of data to the buffer memory to make a threshold determination of an amount of data transferred to the buffer memory.

p. At least Petersen, Brown, and Sherer, and the '459 assignee and prosecution counsel had a duty of candor in the prosecution that led to the '872 Patent.

q. At least Petersen, Brown, and Sherer, and the '459 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of the co-pendency of the '459 Application. At least the '459 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of (i) the co-pendency of the '459 PCT and the '459 EP and (ii) the '459 ISR, the '459 References, the '459 EP SSR, and the '459 EP References. That is, at least Petersen, Brown, and Sherer and the '459 assignee and prosecution counsel knew of the similarity in disclosure between the '459 and '872 Patents' disclosures, and at least the '459 assignee and prosecution counsel knew that the '459 examiner had found the '459 References relevant to the '459 Application and the '459 PCT.

r. However, neither the co-pendency of the '459 Application, the '459 PCT, or the '459 EP, nor the '459 ISR the '459 References, the '459 EP SSR, or the '459 EP References were disclosed in the '872 Prosecution.

s. On information and belief, the '459 Application, the '459 PCT, the '459 EP, the '459 ISR, the '459 Rejections, the '459 References, the '459 EP SSR, and the '459 EP References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '752 Patent, PCT, and EP Applications

t. The Patentee committed further acts of inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to the '752 Patent.

u. The '752 Application which ultimately led to the '752 Patent, was filed on September 18, 1992 by the same counsel on behalf of two of the same named inventors (Brian Peterson and Lai-Chin Lo) and the same assignee as the '872 Application.

v. The '752 PCT was filed on September 17, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '872 and '752 Applications. The '752 EP, based on the '752 PCT, was filed on September 17, 1993.

w. The '872 Application was reviewed by a different examiner than the '752 Application, the '752 PCT, and the '752 EP.

x. The disclosures of the '872 and '752 Patents overlap to a significant extent.

y. At least the following '752 References reviewed by the '752 examiner were material to but not disclosed during prosecution of the '872 Patent: Yamamoto, Kozlik, Francisco, Chiu, and Fischer.

z. All of these references relate to the limitations of the '872 claims that call for supplying a signal. Yamamoto, Kozlik, and Fischer relate to the limitations of the '872 claims that call for a buffer memory. Yamamoto, Kozlik and Chiu relate to the limitations of the '872 claims that call for a network interface means. Kozlik, Chiu, and Fischer relate to the limitations of the '872 claims that call for transferring data of frames.

aa. While the '872 prosecution was pending, three of the '752 References (Yamamoto, Kozlik, and Fischer) were cited again to at least the assignee and prosecution counsel of the '752 Application in the December 27, 1993 '752 PCT International Search Report (the '752 ISR).

bb. The '752 References would have been material because the features of the claims of the '872 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

cc. At least Petersen, the '752 assignee, and the prosecution counsel had a duty of candor in the prosecution that led to the '872 Patent.

dd. At least Petersen, the assignee, and the prosecution counsel of the '752 Application knew of facts sufficient to establish the materiality to the '872 prosecution of the co-pendency of the '752 Application. At least the '752 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of (i) the co-pendency of the '752 PCT and the '752 EP and (ii) the '752 Rejections, the '752 ISR, and the '752 References. That is, at least Petersen, and the '752 assignee, and prosecution counsel knew of the similarity

in disclosure between the '872 and '752 disclosures, and at least the '752 assignee and prosecution counsel knew that the '752 examiner had found the '752 References relevant to the '752 Application and the '752 PCT, and had twice rejected the '752 Application.

ee. However, neither the co-pendency of the '752 Application, the '752 PCT, and the '752 EP nor the '752 Rejections, the '752 ISR, and the '752 References were disclosed in the '872 Prosecution.

ff. On information and belief, the '752 Application, the '752 PCT, the '752 EP, the '752 Rejections, and the '752 References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '406 Patent and PCT Applications

gg. The Patentee committed further acts of inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to the '406 Patent.

hh. The '406 Application, which ultimately led to the '406 Patent was filed on September 18, 1992 by the same counsel on behalf of two of the same named inventors (Brian Peterson and David R. Brown,) and the same assignee as the '872 Application.

ii. The '406 PCT was filed on September 17, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and David R. Brown) and the same assignee as the '872 and '406 Applications.

jj. The '872 Application was reviewed by a different examiner than the '406 Application and the '406 PCT.

kk. The disclosures of the '872 and '406 Patents overlap to a significant extent.

ll. On November 9, 1993 and the April 26, 1994 the '406 examiner issued rejections (the '406 Rejections) of the '406 Application.

mm. At least the following references were reviewed by the '406 examiner and were material to, but not disclosed during, prosecution of the '872 Patent: U.S. Patents 4,447,878 (Kinnie); 4,506,345 (Boothroyd); 4,672,570 (Benken); 4,841,435 (Papenberg); 4,959,779 (Weber); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); 5,170,477 (Potter); 5,179,671 (Kelly); and 5,185,876 (Nguyen); 5,274,763 (Banks); and 5,276,891 (Patel) (collectively the '406-872 References).

nn. All of the '406-872 References reviewed by the '406 examiner were material to but not disclosed during prosecution of the '872 Patent.

oo. These references relate to the limitations of the '872 Patent that call for supplying a signal. Kinnie, Boothroyd, Benken, Papenberg, Chisholm, Brooks, Kinoshita, Vo, Potter, and Nguyen relate to the limitations of the '872 Patent that call for a buffer memory. Benken relates to the limitations of the '872 Patent that call for transferring data of frames. Benken and Banks relate to the limitations of the '872 Patent that call for a network interface device. Benken relates to the limitations of the '872 Patent that call for transmit descriptors.

pp. While the '872 prosecution was ongoing, all ten of the '406-872 References were cited again to at least the assignee and prosecution counsel of the '406 Application in the January 11, 1994 '406 PCT International Search Report (the '406 ISR). These references were considered by the searching authority as relevant and/or invalidating.

qq. The '406-872 References would have been material because the features of the claims of the '872 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

rr. At least Petersen, Brown, and the '406 assignee and prosecution counsel had a duty of candor in the prosecution that led to the '872 Patent.

ss. At least Petersen, Brown, and the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of the copendency of the '406 Application. At least the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of (i) the co-pendency of the '406 PCT, and (ii) the '406 Rejections, the '406 ISR, and the '406-872 References. That is, at least Petersen, Brown, and the '406 assignee and prosecution counsel knew of the similarity in disclosure between the '872 and '406 disclosures, and at least the '406 assignee and prosecution counsel knew that the '406 examiner had found the '406-872 References relevant to the '406 Application and the '406 PCT, and had twice rejected the '406 Application.

tt. However, neither the co-pendency of the '406 Application and the '406 PCT, nor the '406 Rejections, the '406 ISR, and the '406-872 References were disclosed in the '872 Prosecution.

uu. On information and belief, the '406 Application, the '406 PCT, the '406 Rejections, and the '406-872 References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '627 Patent and PCT Applications

vv. The Patentee committed further acts of inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to U.S. Patent 5,517,627 (the '627 Patent).

ww. Application No. 08/113,417 (the '627 Application), which ultimately led to the '627 Patent was a continuation-in-part application of the '406 Patent and was filed on Aug 27, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '872 Application (collectively the '627 Applicants).

xx. PCT Application PCT/US1994/09723 (the '627 PCT) was filed on August 24, 1994 and claims priority to the '627 Application by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '872 and '627 Applications.

yy. The '872 Application was reviewed by a different examiner than the '627 Application and the '627 PCT.

zz. On December 19, 1994, the '627 examiner issued a rejection of the '627 Application.

aaa. At least the following references were reviewed by the '627 examiner and were material to, but not disclosed during, the prosecution of the '872 Patent: 4,131,940 (Moyer); 4,447,878 (Kinnie); 4,654,781 (Schwartz); 4,663,732 (Robinson); 4,672,570 (Benken); 4,959,779 (Weber); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); 5,179,671 (Kelly); 5,185,876 (Nguyen); and 5,274,763 (Banks) (collectively the '627-872 References).

bbb. The '627 Applicant cited ten of the '627-872 References (Kinnie, Benken, Weber, Chisholm, Brooks, Kinoshita, Pleva, Vo, Kelly, Nguyen) in an Information Disclosure Statement filing of February 7, 1994 ('627 IDS).

ccc. The '627-872 References relate to the limitations of the '872 claims that call for supplying a signal. Moyer, Robinson, Kinnie, Benken, Chisholm, Brooks, Kinoshita, Vo, and Nguyen relate to the limitations of the '872 claims that call for a buffer memory. Benken relates to the limitations of the '872 claims that call for transferring data of frames. Benken and Pleva relate to the limitations of the '872 claims that call for a network interface device. Benken relates to the limitations of the '872 claims that call for transmit descriptors.

ddd. While the '872 prosecution was pending, seven of the '627-872 References (Vo, Benken, Moyer, Schwartz, Hirasawa, Robinson, and Banks) were cited again to at least the assignee and prosecution counsel of the '627 Application in the February 13, 1995 '627 PCT International Search Report (the '627 ISR). At least Vo, Benken, Moyer, and Banks were identified by the searching authority as of particular relevance.

eee. The '627-872 References would have been material because the features of the claims of the '872 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

fff. All of the '627 Applicants had a duty of candor in the prosecution that led to the '872 Patent.

ggg. All of the '627 Applicants knew of facts sufficient to establish the materiality to the '872 prosecution of the co-pendency of the '627 Application. At least the '627 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of (i) the '627 PCT, (ii) the December 19, 1994 Rejection, and (iii) the '627 IDS, '627 ISR, and '627-872 References. That is, at least the '627 assignee and prosecution counsel knew that the '627 examiner had found the '627-872 References relevant to the '627 Application and the '627 PCT and had twice rejected the '627 Application.

hhh. However, neither the co-pendency of the '627 Application and the '627 PCT, nor the '627 Rejections, the '627 ISR, and the '627-872 References were disclosed in the '872 Prosecution.

iii. On information and belief, the '627 Application, the '627 PCT, the '627 Rejections, the '627 ISR, and the '627-872 References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '874 Patent, PCT, and EP Applications

jjj. The Patentee committed further acts of inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to the '874 Patent.

kkk. The '874 Application, which ultimately led to the '874 Patent was filed on February 2, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '872 Application.

lll. The '874 PCT claims priority to the '874 Application (having substantially the same disclosure) and was filed on December 28, 1993 by the same counsel on behalf of the two same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '874 Application and '872 Application.

mmm. The '872 Application was reviewed by a different examiner than the '874 Application, the '874 PCT and '874 EP.

nnn. The disclosures of the '872 and '874 Patents overlap to a significant extent.

ooo. At least the following references reviewed by the '874 examiner were material to, but not disclosed during, the prosecution of the '872 Patent: U.S. Patents 3,905,025 (Davis); 4,349,872 (Fukasawa); 4,807,117 (Itoku); 4,847,752 (Akashi); 4,987,535 (Takayama); 5,146,595 (Fujiyama); 5,161,228 (Yasui); 5,179,704 (Jibbe); 5,193,195 (Miyazaki); 5,283,904 (Carson), and 5,349,667 (Kaneko) (collectively the '874-872 References).

ppp. On September 20, 1994 and May 19, 1995, the '874 examiner issued rejections (the '874 Rejections) of the '874 Application.

qqq. The '874-872 references relate to the limitations of the '872 Patent that call for supplying a signal. Davis, Fukasawa, Akashi, Takayama, Miyazaki, Carson, and Kaneko relate to the limitations of the '872 Patent that call for a buffer memory.

rrr. While the '872 prosecution was pending, three of the '874-872 References (Akashi, Takayama, and Fukasawa) were cited again to at least the assignee and prosecution counsel of the '874 Application in the August 1, 1994 '874 PCT International Search Report (the '874 ISR). These references were identified again by the searching authority as of particular relevance. Likewise, while the '872 Application was pending, two additional '874-872 References (Yasui and Jibbe) were cited again to at least the assignee and prosecution counsel of the '874 Application in the June 19, 1995 '874 PCT Preliminary Examination Report (the '874 PCT Exam).

sss. These '874-872 References would have been material because the features of the claims of the '872 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

ttt. At least Petersen and the '874 assignee and prosecution had a duty of candor in the prosecution that led to the '872 Patent.

uuu. At least Petersen and the '874 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of the co-pendency of the '874 Application. At least the '874 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '872 prosecution of (i) the copendency of the '874 PCT and the '874 EP and (ii) the '874 ISR, the '874 PCT Exam, and the '874-872 References. That is, least Petersen and the '874 assignee and prosecution counsel knew of the similarity in disclosure between the '872 and '874 disclosures, and the '874 assignee and prosecution counsel knew that the '874 examiner had found the '874-872 References relevant to the '874 Application and the '874 PCT, and had twice rejected the '874 Application.

vvv. However, neither the co-pendency of the '874 Application and the '874 PCT, '874 EP, nor the '874 Rejections, the '874 ISR, the '874 PCT Exam, and the '874-872 References were disclosed in the '872 Prosecution.

www. On information and belief, the '874 Application, the '874 PCT, the '874 EP, the '874 Rejections, the '874 ISR, the '874 PCT Exam, and the '874-872 References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '313 Patent, PCT, and EP Applications

xxx. The Patentee committed inequitable conduct during the prosecution of the '872 Patent by failing to disclose the applications, rejections, and references related to the '313 Patent.

yyy. Application No. 07/921,519 (the '313 Application), which ultimately led to the '313 Patent, was filed on the same date by the same counsel on behalf of the same named

inventors (Peterson, Sherer, and Brown) and the same assignee as the '872 Application (collectively, the '313 Applicants).

zzz. PCT Application PCT/US1993/07027 (the '313 PCT) claims priority to the '313 Application (having substantially the same disclosure) and was filed on July 27, 1993, by the same counsel on behalf of the same named inventors (Peterson, Sherer, and Brown) and the same assignee as the '872 Application. The European Patent Application EP0606462 (the '313 EP) based on the '313 PCT was filed on February 25, 1994, and lists all three of the named inventors listed in the '872 Application.

aaaa. The '872 Application was reviewed by a different examiner than the '313 Patent, PCT, EP applications.

bbbb. On September 21, 1993, the '313 Application received a Notice of Allowance in which the examiner cited U.S. Patent No. 4,672,570 (Benken).

cccc. Although the '872 Applicants cited the copendency of the '313 Application upon the filing of their October 11, 1994 Response to an Office Action, the '872 Applicants did not disclose to the examiner of the '872 Application either the September 21, 1993 Allowance of the '313 Patent or the Benken reference.

dddd. The '872 and '313 Patents' disclosures overlap to a significant extent, as evidenced by the '872 Applicants' disclosure of the '313 Application as a related copending application.

eeee. The Benken reference was material to, but not disclosed during, prosecution of the '872 Application. The Benken reference discloses various limitations of the claims of the '872 Application, such as generating a signal, generating an interrupt, a buffer

memory, network interface logic, host interface logic, transmit descriptor logic, and download logic.

ffff. On November 26, 1993, during the prosecution of the '872 Patent, the following references were cited in the '313 International Search Report (the '313 ISR): U.S. Patents 4,672,570 (Benken), 4,471,427 (Harris), 4,604,682 (Schwan), and 5,121,390 (Farrell) (collectively the '313 ISR References).

gggg. The '313 ISR References were material to, but not disclosed during, the prosecution of the '872 Application. The '313 ISR References relate to the limitations of the '872 Patent. For example, Harris relates to the limitations of the '872 Patent that call for a buffer memory, supplying a signal, and network interface means. Schwan relates to the limitations of the '872 Patent that call for a buffer memory and supplying a signal. Farrell relates to the limitations of the '872 Patent that call for a buffer memory, network interface means, and supplying a signal.

hhhh. On May 2, 1994, during the prosecution of the '872 Patent, the European Patent Office issued a Supplemental European Search Report for the '313 EP ('313 EP SSR) that cited U.S. Patent No. 4,947,366 (Johnson) as a reference that was "particularly relevant if taken alone."

iiii. The Johnson reference was material to, but not disclosed during, the prosecution of the '872 Application. For example, Johnson relates to the limitations of the '872 Patent that call for a buffer memory, supplying an indication signal, and parallel read and write operations.

jjjj. All of the '313 Applicants were participants in the prosecutions of the '313 Patent and were persons with a duty of candor in the prosecution that led to the '872 Patent.

kkkk. The '313 Applicants knew of the materiality to the '872 prosecution of (i) the Benken reference, (ii) the co-pendency of the '313 PCT and '313 EP Applications, (iii) the '313 ISR and '313 EP SSR, and (iv) the '313 ISR and Johnson references, yet failed to disclose any of these actions or references in the '872 Prosecution.

llll. On information and belief, the (i) Benken reference, (ii) co-pendency of the '313 PCT and '313 EP Applications, (iii) '313 ISR and '313 EP SSR, and (iv) '313 ISR and Johnson references were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '782 Patent Application

mmmm. The Patentee committed further inequitable conduct during the prosecution of the '872 Patent by failing to disclose the application, rejections, and references related to U.S. Patent 5,412,782 (the '782 Patent).

nnnn. Application No. 07/907,946 (the '782 Application), which ultimately led to the '782 Patent, was filed on July 2, 1992, by prosecution attorney Eric H. Willgohs of Townsend and Townsend on behalf of one of the same named inventors (Paul W. Sherer) and the same assignee as the '872 Application.

oooo. The '872 Application was reviewed by a different examiner than the '782 Application.

pppp. The '872 and '782 Patents' disclosures relate to substantially the same subject matter. For example, the '782 Patent discloses "adjusting the TX start threshold to an amount larger than the packet, so transmission will not begin until the packet is completely copied into the adapter" and that "the adapter is allowed to begin packet transmission before the

packet is completely transferred from the host to the adapter, which further reduces latency.” These disclosures directly relate to the heart of the alleged invention claimed in the ‘872 Patent.

qqqq. At least the following references were reviewed by the ‘782 examiner and were material to, but not disclosed during, prosecution of the ‘872 Patent: U.S. Patents 4,768,190 (Giancarlo), 5,210,829 (Bitner), and 5,121,479 (O'Brien) (collectively the ‘782 References).

rrrr. On January 14, 1994 and July 7, 1994, the ‘752 examiner issued rejections (the ‘782 Rejections) of the ‘782 Application.

ssss. Giancarlo relates to the limitations of the ‘872 Patent that call for supplying a signal, a buffer memory, network interface means, and transferring data of frames. O'Brien relates to supplying a signal and a buffer memory. Bitner relates to supplying a signal and underrun control logic.

tttt. The ‘782 assignee was a participant in the prosecution of the ‘782 Patent and had a duty of candor in the prosecution that led to the ‘872 Patent.

uuuu. At least the ‘782 assignee knew of facts sufficient to establish the materiality of the ‘782 References and the ‘782 Rejections. That is, the assignee knew of the similarity in disclosure between the ‘872 and ‘782 disclosures, and at least the ‘782 assignee knew that the ‘782 References had been cited in the ‘782 Application.

vvvv. However, the copendency of the ‘782 Application, the ‘782 Rejections, and the ‘782 References were not disclosed in the ‘872 Prosecution.

www. On information and belief, the ‘782 Application, the ‘782 Rejections, and the ‘782 References were therefore concealed from the examiner in the ‘872 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

Intel 82586 local area network coprocessor

xxxx. On information and belief, the Intel 82586 local area network coprocessor and the documentation describing it (“the Intel 82586”) is material prior art, as defined by 37 C.F.R. § 1.56(b), because the Intel 82586 and the documentation describing it separately and collectively invalidates all of the asserted claims in the ’872 patent. Accordingly, a reasonable examiner would have found that the Intel 82586 and the documentation describing it, alone or in combination with other information, was material to the prosecution of the ’872 Patent, because, at a minimum, it established a prima facie case of unpatentability for all claims in the ’872 patent.

yyyy. Further, the Intel 82586 was known by the inventors, their counsel, and 3Com (collectively “Applicants”) to be prior art material to the application that led to the ’872 Patent, because the Intel 82586 is described as relevant prior art in the Background of the Invention section of the ’872 Application.

zzzz. On information and belief, some or all of Applicants had full knowledge of the operation and features of the Intel 82586, because they were able to summarize certain aspects of the operations and features of the Intel 82586 in the Background section of the ’872 Patent.

aaaaa. The prosecution history of the ’872 Patent demonstrates that Applicants withheld the source of their information concerning the operation and functionality of the Intel 82586 from the PTO during the filing and prosecution of the ’872 Application because only very limited disclosure was made of the Intel 82586 chip in the background of the ’872 Patent and no documentation describing its features or functionality was provided to the PTO, despite the fact

that the chip and its documentation must have been known to some or all of Applicants in order to provide the information set forth in the Background section of the '872 Patent.

bbbb. On information and belief, the documentation for the Intel 82586 would have disclosed that Applicants' description of the functionality and operation of that chip to the PTO was incomplete and misleading and that, in fact, the chip and its documentation invalidated at least all of the asserted claims of the '872 Patent.

cccc. A reasonable examiner also would have found that the Applicants' description of the Intel 82586 and Applicants' assertions of patentability for the '872 Application were inconsistent with, and refuted by, the features and operation of the Intel 82586 and that the documentation demonstrating these inconsistencies, but withheld by some or all of Applicants, was not cumulative to information in the prosecution record, including cited references and documented communications between the Applicants and PTO.

dddd. The prosecution history of the '872 Patent therefore demonstrates that the Applicants who were knowledgeable about the features and operation of the Intel 82586 chip misrepresented and knowingly and intentionally concealed material information regarding the state of the prior art, and specifically the features and operation of the Intel 82586.

eeee. The Applicants obtained allowance of claims then pending in the '872 Application as a result of not fully disclosing the Intel 82586 and withholding documentation concerning its features and functionality, by misrepresenting the true state of the prior art, and by misrepresenting how the Intel 82586 operated.

ffff. The '872 patent is therefore unenforceable due to inequitable conduct.

gggg. On information and belief, there is a substantial likelihood that a reasonable examiner would have considered the above identified references, co-pending

applications, and rejections important in deciding whether to allow the '872 Patent to issue. In particular, the examiner would not have allowed at least claims 1 and 21 with knowledge of the above-identified references, co-pending applications, and rejections.

hhhhh. At least some of the above identified references that were not cited during the prosecution of the '872 Patent were not cumulative to the prior art made of record during the prosecution of the '872 Patent.

74. In defense to Plaintiff's allegations that Brother has infringed the '094 Patent, Brother alleges that the '094 Patent is unenforceable by reason of inequitable conduct committed during the prosecution of that patent as follows:

a. Application No. 08/715,253 (the '094 Application), which ultimately led to the '094 Patent, was filed as a continuation of abandoned Application No. 08/716,253 (the '253 Application), which itself was a continuation of the '872 Application, on September 16, 1996 on behalf of named inventors Brian Peterson, W. Paul Sherer, and David R. Brown, and named assignee, 3Com Corporation (for ease of reference, the prosecution of the '253 Application will be considered as synonymous with the prosecution of the '094 Application). Mark Haynes of Fleisler, Dubb, Meyer & Lovejoy was identified as counsel for the owner.

The '459 Patent, PCT, and EP Applications

b. The Patentee committed inequitable conduct during the prosecution of the '094 Patent by failing to disclose the applications, rejections, and references related to the '459 Patent.

c. The '459 Application which ultimately led to the '459 Patent, was previously filed by the same counsel on behalf of the same inventors (Petersen, Brown, and Sherer) and the same named assignee as the '094 Application.

d. PCT Application PCT/US1993/07056 (the '459 PCT) was filed on July 27, 1993 and claims priority to the '459 Application by the same counsel on behalf of the same inventors (Petersen, Brown, and Sherer) and the same named assignee as the '094 Application and the '459 Application. The European Patent Application EP0607412 (the '459 EP) was filed on February 24, 1994 based on the '459 PCT.

e. The '094 Application was reviewed by a different examiner than the '459 Application, the '459 PCT, and the '459 EP.

f. The disclosures of the '094 and '459 Patents overlap to a significant extent.

g. In the Preliminary Amendment of March 3, 1995, the '094 Applicants added claims directed to CSMA/CD. In the Response of March 2, 1994, during prosecution of the '872 Patent which is the parent of the '094 Patent, at least the prosecution counsel of the '094 Application argued that:

In particular, the invention as recited in the new claims is limited to a CSMA/CD network adapter. This kind of network is fundamentally different from the FDDI network of Firoozmand, et al. In the FDDI environment, no transmissions are initiated until the transmitting station receives the token from the network. Thus, Firoozmand, et al. will not begin transmitting a first frame while the transmitting station has the token, unless at least one entire frame is present in the transmit buffer. Firoozmand, et al. does not use the transmit threshold determination for a first frame in a transmission sequence. Rather, this threshold determination is only

used in succeeding frames. See Firoozmand, at al. column 10, line 53-68. (emphasis added)

h. At least the following references reviewed by the '459 examiner were material to, but not disclosed during, the prosecution of the '094 Patent: U.S. Patents 4,907,225 (Gulick 2) and 5,101,477 (Casper) (collectively the '459-094 References). These references were cited to the '872 Applicants in the Notice of Allowability of October 14, 1993 of the '459 Application.

i. The '459-094 References relate to the limitations of the '094 Patent that call for supplying a signal, a buffer memory, a network interface device, a frame transmission task, and a threshold determination based on a comparison of a count of data transferred and a programmable threshold value.

j. The '459 References (Gulick 1, Gulick 2, and Casper) were cited *again* to at least the assignee and prosecution counsel of the '459 Application in the November 15, 1993 of the '459 International Search Report (the '459 ISR).

k. These '459 References would have been material because the limitations of the claims of the '094 Application were disclosed by, inherent in, or obvious in light of one or more of these references. For example, these references are related to using the *threshold determination* for any frame. The '094 Examiner would have, therefore, considered these references highly material because they could have been combined with Firoozmand *et al.* or other '094 references to make obvious the claims of the '094 Application directed to CSMA/CD.

l. During prosecution of the '459 EP, the following references, inter alia, were cited: "Early Interrupt for Disk Controller," IBM Technical Disclosure Bulletin, vol. 25, no. 9, February 1983, p. 4703 (IBM) and 5,179,709 (Bailey) (collectively the '459 EP References).

These references were cited to the '872 Applicants in the April 27, 1994 Supplementary European Search Report ('459 EP SSR).

m. These references relate to the limitations of the '872 Patent. IBM relates to the limitations of the '872 Patent that call for an alterable threshold value. Bailey relates to the limitations of the '872 Patent that call for a buffer memory and making a threshold determination based on a comparison of a count of data transferred into the buffer memory with a threshold value.

n. At least Petersen, Brown, and Sherer, and the '459 assignee and prosecution counsel had a duty of candor in the prosecution that led to the '094 Patent.

o. At least Petersen, Brown, and Sherer, and the '459 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of the co-pendency of the '459 Application. At least the '459 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of (i) the co-pendency of the '459 PCT and the '459 EP and (ii) the '459 ISR and the '459 References, the '459 EP SSR, and the '459 EP References. That is, at least Petersen, Brown, and Sherer, and the '459 assignee and prosecution counsel knew of the similarity in disclosure between the '459 and '094 Patents' disclosures, and at least the '459 assignee and prosecution counsel knew that the '459 examiner had found the '459 References relevant to the '459 Application and the '459 PCT.

p. However, neither the co-pendency of the '459 Application, the '459 PCT, or the '459 EP, nor the '459 ISR the '459 References, the '459 EP SSR, or the '459 EP References were disclosed in the '094 Prosecution.

q. On information and belief, the '459 Application, the '459 PCT, the '459 EP, the '459 ISR, the '459 Rejections, the '459 References, the '459 EP SSR, and the '459 EP

References were therefore concealed from the examiner in the '872 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '752 Patent, PCT, and EP Applications

r. The Patentee committed further acts of inequitable conduct during the prosecution of the '094 Patent by failing to disclose the applications, rejections, and references related to the '752 Patent.

s. The '752 Application which ultimately led to the '752 Patent, was filed on September 18, 1992 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '094 Application.

t. The '752 PCT was filed on September 17, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '094 and '752 Applications. The '752 EP, based on the '752 PCT, was filed on September 17, 1993.

u. The '094 Application was reviewed by a different examiner than the '459 Application, the '752 PCT, and the '752 EP.

v. The disclosures of the '094 and '752 Patents overlap to a significant extent.

w. At least the following '752 References reviewed by the '752 examiner were material to but not disclosed during prosecution of the '094 Patent: Yamamoto, Kozlik, Francisco, Chiu, and Fischer.

x. All references relate to the limitations of the '094 Patent that call for supplying a signal. Yamamoto, Kozlik, and Fischer relate to the limitations of the '094 Patent that call for a buffer memory. Yamamoto, Kozlik and Chiu relate to the limitations of the '094

Patent that call for a network interface device. Kozlik, Chiu, and Fischer relate to the limitations of the '094 Patent that call for a frame transfer task.

y. Three of the '752 References (Yamamoto, Kozlik, and Fischer) were cited again to at least the assignee and prosecution counsel of the '752 Application in the December 27, 1993 '752 PCT International Search Report (the '752 ISR).

z. The '752 References would have been material because the features of the claims of the '094 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

aa. At least Petersen, the '752 assignee, and prosecution counsel had a duty of candor in the prosecution that led to the '094 Patent.

bb. At least Petersen, the assignee, and the prosecution counsel of the '752 Application knew of facts sufficient to establish the materiality to the '094 prosecution of the co-pendency of the '752 Application. At least the '752 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of (i) the co-pendency of the '752 PCT, and the '752 EP and (ii) the '752 Rejections, the '752 ISR, and the '752 References. That is, at least Petersen, the '752 assignee, and prosecution counsel knew of the similarity in disclosure between the '094 and '752 disclosures, and at least the '752 assignee and prosecution counsel knew that the '752 examiner had found the '752 References relevant to the '752 Application and the '752 PCT, and had twice rejected the '752 Application.

cc. However, neither the co-pendency of the '752 Application, the '752 PCT, and the '752 EP, nor the '752 Rejections, the '752 ISR, and the '752 References were disclosed in the '094 Prosecution.

dd. On information and belief, the '752 Application, the '752 PCT, the '752 EP, the '752 Rejections, and the '752 References were therefore concealed from the examiner in the '094 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '406 Patent and PCT Applications

ee. The Patentee committed inequitable conduct during the prosecution of the '094 Patent by failing to disclose the applications, rejections, and references related to the '406 Patent.

ff. The '406 Application, which ultimately led to the '406 Patent was filed on September 18, 1992 by the same counsel on behalf of two of the same named inventors (Brian Peterson and David R. Brown,) and the same assignee as the '094 Application.

gg. The '406 PCT was filed on September 17, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and David R. Brown) and the same assignee as the '094 and '406 Applications.

hh. The '094 Application was reviewed by a different examiner than the '406 Application and the '406 PCT.

ii. The disclosures of the '094 and '406 Patents overlap to a significant extent.

jj. At least the following references were reviewed by the '406 examiner were material to, but not disclosed, during the prosecution of the '094 Patent: U.S. Patents 4,447,878 (Kinnie); 4,506,345 (Boothroyd); 4,672,570 (Benken); 4,841,435 (Papenberg); 4,959,779 (Weber); 4,992,931 (Hirasawa); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); 5,170,477 (Potter); 5,179,671 (Kelly);

and 5,185,876 (Nguyen); 5,274,763 (Banks); and 5,276,891 (Patel) (collectively the '406-094 References).

kk. These references relate to the limitations of the '094 Patent that call for supplying a signal. Kinnie, Boothroyd, Benken, Papenberg, Chisholm, Brooks, Kinoshita, Vo, Potter, and Nguyen relate to the limitations of the '094 Patent that call for a buffer memory. Benken relates to the limitations of the '094 Patent that call for a frame transmission task. Benken and Banks relate to the limitations of the '094 Patent that call for a network interface device. Benken relates to the limitations of the '094 Patent that call for a descriptor for a frame.

ll. Ten of the '406-094 References (Vo, Benken, Kinoshita, Chisholm, Weber, Kinnie, Brooks, Pleva, Kelly, and Nguyen) were cited again to at least the assignee and prosecution counsel of the '406 Application in the January 11, 1994 '406 PCT International Search Report (the '406 ISR). These references were considered by the searching authority as relevant and/or invalidating.

mm. The '406-094 References would have been material because the features of the claims of the '094 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

nn. At least Petersen, Brown, and the '406 assignee and prosecution counsel had a duty of candor in the prosecution that led to the '094 Patent.

oo. At least Petersen, Brown, and the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of the copendency of the '406 Application. At least the '406 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of (i) the co-pendency of the '406 PCT, and (ii) the '406 Rejections, the '406 ISR, and the '406-094 References. That is, at least Petersen,

Brown, and the '406 assignee and prosecution counsel knew of the similarity in disclosure between the '094 and '406 disclosures, and at least the '406 assignee and prosecution counsel knew that the '406 examiner had found the '406-094 References relevant to the '406 Application and the '406 PCT, and had twice rejected the '406 Application.

pp. However, neither the co-pendency of the '406 Application and the '406 PCT, nor the '406 Rejections, the '406 ISR, and the '406-094 References were disclosed in the '094 Prosecution.

qq. On information and belief, the '406 Application, the '406 PCT, the '406 Rejections, and the '406-094 References were therefore concealed from the examiner in the '094 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '627 Patent and PCT Applications

rr. The Patentee committed further acts of inequitable conduct during the prosecution of the '094 Patent by failing to disclose the applications, rejections, and references related to the '627 Patent.

ss. The '627 Application, which ultimately led to the '627 Patent was a continuation-in-part application of the '406 Patent and was filed on August 27, 1993 by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '094 Application.

tt. The '627 PCT was filed on August 24, 1994 and claims priority to the '627 Application by the same counsel on behalf of one of the same named inventors (Brian Peterson) and the same assignee as the '094 and '752 Applications.

uu. The '094 Application was reviewed by a different examiner than the '627 Application and the '627 PCT.

vv. On December 19, 1994, and July 27, 1995, the '627 examiner issued rejections (the '627 Rejections) of the '627 Application.

ww. At least the following references reviewed by the '627 examiner were material to, but not disclosed during, the prosecution of the '094 Patent: 4,131,940 (Moyer); 4,447,878 (Kinnie); 4,455,606 (Cushing); 4,654,781 (Schwartz); 4,663,732 (Robinson); 4,667,305 (Dill); 4,672,570 (Benken); 4,959,779 (Weber); 5,014,186 (Chisholm); 5,058,051 (Brooks); 5,113,369 (Kinoshita); 5,125,080 (Pleva); 5,168,561 (Vo); 5,179,671 (Kelly); 5,185,876 (Nguyen); and 5,274,763 (Banks); and 5,297,242 (Miki) (collectively the '627-094 References).

xx. The '627 Applicant cited ten of the '627-094 References (Kinnie, Benken, Weber, Chisholm, Brooks, Kinoshita, Pleva, Vo, Kelly, Nguyen) in an Information Disclosure Statement filing of February 7, 1994 ('627 IDS).

yy. The '627-094 references relate to the limitations of the '094 Patent that call for supplying a signal. Moyer, Cushing, Robinson, Dill, Miki, Kinnie, Benken, Chisholm, Brooks, Kinoshita, Vo, and Nguyen relate to the limitations of the '094 Patent that call for a buffer memory. Benken relates to the limitations of the '094 Patent that call for a frame transmission task. Benken, Brooks, Pleva, and Banks relate to the limitations of the '094 Patent that call for a network interface device. Benken relates to the limitations of the '094 Patent that call for a descriptor for a frame.

zz. During the prosecution of the '094 Patent, seven of the '627-094 References (Vo, Benken, Moyer, Schwartz, Hirasawa, Robinson, and Banks) were cited again to

at least the assignee and prosecution counsel of the '627 Application in the February 13, 1995 '627 PCT International Search Report (the '627 ISR). At least Vo, Benken, Moyer, and Banks were identified by the searching authority as of particular relevance.

aaa. The '627-094 References would have been material because the features of the claims of the '094 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

bbb. All of the '627 Applicants had a duty of candor in the prosecution that led to the '094 Patent.

ccc. All of the '627 Applicants knew of facts sufficient to establish the materiality to the '094 prosecution of the co-pendency of the '627 Application. At least the '627 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of (i) the co-pendency of (i) the '627 PCT, (ii) the '627 Rejections, and (iii) the '627 IDS, '627 ISR, and '627-094 References. That is, at least the '627 assignee and prosecution counsel knew that the '627 examiner had found the '627-094 References relevant to the '627 Application and the '627 PCT, and had twice rejected the '627 Application.

ddd. However, neither the co-pendency of the '627 Application and the '627 PCT, nor the '627 Rejections, the '627 ISR, and the '627-094 References were disclosed in the '094 Prosecution.

eee. On information and belief, the '627 Application, the '627 PCT, the '627 Rejections, the '627 ISR, and the '627-094 References were therefore concealed from the examiner in the '094 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '874 Patent, PCT, and EP Applications

fff. The Patentee committed inequitable conduct during the prosecution of the '094 Patent by failing to disclose the applications, rejections, and references related to the '874 Patent.

ggg. The '874 Application, which ultimately led to the '874 Patent was filed on February 2, 1993 by the same counsel on behalf of two of the same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '094 Application.

hhh. The '874 PCT claims priority to the '874 Application (having substantially the same disclosure) and was filed on December 28, 1993 by the same counsel on behalf of the two same named inventors (Brian Peterson and W. Paul Sherer) and the same assignee as the '874 Application and '094 Application. The '874 EP, based on the '874 PCT, was filed on July 13, 1995.

iii. The '094 Application was reviewed by a different examiner than the '874 Application, the '874 PCT, and the '874 EP.

jjj. The disclosures of the '094 and '874 Patents overlap to a significant extent.

kkk. In the Preliminary Amendment of March 3, 1995, the '094 Applicants added claims directed to CSMA/CD. In the Response of March 2, 1994, during prosecution of the '872 Patent which is the parent of the parent of the '094 patent, at least the prosecution counsel of the '094 Application argued that: "In particular, the invention as recited in the new claims is limited to a *CSMA/CD* network adapter." (emphasis added)

lll. At least the following references reviewed by the '874 examiner were material to, but not disclosed during, the prosecution of the '094 Patent: U.S. Patents 3,905,025

(Davis); 4,349,872 (Fukasawa); 4,631,659 (Hayn); 4,768,149 (Konopik); 4,807,117 (Itoku); 4,847,752 (Akashi); 4,961,161 (Kojima); 4,987,535 (Takayama); 5,146,595 (Fujiyama); 5,161,228 (Yasui); 5,179,704 (Jibbe); 5,193,195 (Miyazaki); 5,283,904 (Carson), and 5,349,667 (Kaneko) and articles, Chiang, AI, "An EtherStar is Born", ESD: Magazine, Digital Design Publishing Company, March 1988; 1900 West Park Drive, Westborough, MA 01581; and EtherStar Ethernet/Starlan Controller, Fujitsu MB86950, May, 1988 (collectively the '874-094 References).

mmm. The Applicants also cited two of the '874-094 References (Chiang and EtherStar) to the '874 Patent's examiner on January 5, 1996 in an Information Disclosure Statement ('874 IDS).

nnn. The '874-094 References relate to the limitations of the '094 Patent that call for supplying a signal. Davis, Fukasawa, Konopik, Akashi, Takayama, Miyazaki, Carson, Chiang, and Etherstar relate to the limitations of the '094 Patent that call for a buffer memory. Chiang and Etherstar relate to the limitations of the '094 Patent that call for a network interface device. Chiang, Carson, and Etherstar relate to the limitations of the '094 Patent that call for frame transfer task and a CSMA/CD computer network.

ooo. Three of the '874-094 References (Akashi, Takayama, and Fukasawa) were cited again to at least the assignee and prosecution counsel of the '874 Application in the August 1, 1994 '874 PCT International Search Report (the '874 ISR). These references were identified again by the searching authority as of particular relevance. Likewise, while the '094 Application was pending, two additional '874-094 References (Yasui and Jibbe) were cited again to at least the assignee and prosecution counsel of the '874 Application in the June 19, 1995 '874 PCT Preliminary Examination Report (the '874 PCT Exam).

ppp. These '874-094 References would have been material because the features of the claims of the '094 Application were disclosed by, inherent in, or obvious in light of one or more of these references.

qqq. At least Petersen, Sherer, and the '874 assignee and prosecution counsel had a duty of candor in the prosecution that led to the '094 Patent.

rrr. At least Petersen, Sherer, and the '874 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of the co-pendency of the '874 Application. At least the '874 assignee and prosecution counsel knew of facts sufficient to establish the materiality to the '094 prosecution of (i) the co-pendency of the '874 PCT and the '874 EP and (ii) the '874 ISR and the '874-094 References. That is, at least Petersen, Sherer, and the '874 assignee and prosecution counsel knew of the similarity in disclosure between the '094 and '874 disclosures, and the '874 assignee and prosecution counsel knew that the '874 examiner had found the '874-094 References relevant to the '874 Application and the '874 PCT, and had twice rejected the '874 Application.

sss. However, neither the co-pendency of the '874 Application, the '874 PCT, and the '874 EP, nor the '874 Rejections, the '874 ISR, and the '874-094 References were disclosed in the '094 Prosecution.

ttt. On information and belief, the '874 Application, the '874 PCT, the '874 EP, the '874 Rejections, the '874 ISR, and the '874-094 References were therefore concealed from the examiner in the '094 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '313 Patent, PCT, and EP Applications

uuu. The Patentee committed inequitable conduct during the prosecution of the '094 Patent by failing to disclose the references disclosed in the applications related to the '313 Patent.

vvv. Application No. 07/921,519 (the '313 Application), which ultimately led to the '313 Patent, was filed on July 28, 1992, by the same counsel on behalf of the same named inventors (Peterson, Sherer, and Brown) and the same assignee as the '094 Application (collectively, the '313 Applicants).

www. PCT Application PCT/US1993/07027 (the '313 PCT) claims priority to the '313 Application (having substantially the same disclosure) and was filed on July 27, 1993, by the same counsel on behalf of the same named inventors (Peterson, Sherer, and Brown) and the same assignee as the '094 Application. The European Patent Application EP0606462 (the '313 EP), based on the '313 PCT, was filed on February 25, 1994, and lists all three of the named inventors listed in the '094 Application.

xxx. On September 21, 1993, the '313 Application received a Notice of Allowance in which the examiner cited U.S. Patent No. 4,672,570 (Benken).

yyy. Although the '872 Applicants cited the copendency of the '313 Application during the prosecution of the '872 Patent, which is the parent of the '094 Patent, the '094 Applicants did not disclose to the examiner of the '094 Application the Benken reference.

zzz. The '094 and '313 Patents' disclosures overlap to a significant extent, as evidenced by the '094 Applicants' disclosure of the '313 Application as a related copending application in a parent application.

aaaa. The Benken reference was material to, but not disclosed during, prosecution of the '094 Application. The Benken reference discloses various limitations of the claims of the '094 Application, such as a buffer memory and transferring a data frame.

bbbb. On November 26, 1993, the following references were cited in the '313 International Search Report (the '313 ISR): U.S. Patents 4,672,570 (Benken); 4,471,427 (Harris), 4,604,682 (Schwan), and 5,121,390 (Farrell) (collectively the '313 ISR References).

cccc. The '313 ISR References were material to, but not disclosed during, the prosecution of the '094 Application. The '313 ISR References relate to the limitations of the '094 Patent. For example, Harris relates to the limitations of the '094 Patent that call for a buffer memory, supplying a signal, and network interface logic. Schwan relates to the limitations of the '094 Patent that call for a buffer memory and supplying a signal. Farrell relates to the limitations of the '094 Patent that call for a buffer memory, network interface logic, and supplying a signal.

dddd. On May 2, 1994, the European Patent Office issued a Supplemental European Search Report for the '313 EP ('313 EP SSR) that cited U.S. Patent No. 4,947,366 (Johnson) as a reference that was "particularly relevant if taken alone."

eeee. The Johnson reference was material to, but not disclosed during, the prosecution of the '094 Application. For example, Johnson relates to the limitations of the '094 Patent that call for a buffer memory, supplying a signal, and parallel read and write operations.

ffff. All of the '313 Applicants were participants in the prosecutions of the '313 Patent and were persons with a duty of candor in the prosecution that led to the '094 Patent.

gggg. The '313 Applicants knew of the materiality to the '094 prosecution of the Benken reference, the Johnson reference, and the '313 ISR references, yet failed to disclose any of these actions or references in the '094 Prosecution.

hhhh. On information and belief, the Benken reference, the Johnson reference, the '313 ISR References were therefore concealed from the examiner in the '094 Prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

The '782 Patent Application

iiii. The Patentee committed further inequitable conduct during the prosecution of the '094 Patent by failing to disclose the application, rejections, and references related to U.S. Patent 5,412,782 (the '782 Patent).

jjjj. Application No. 07/907,946 (the '782 Application), which ultimately led to the '782 Patent, was filed on July 2, 1992, by prosecution attorney Eric H. Willgohs of Townsend and Townsend on behalf of one of the same named inventors (Paul W. Sherer) and the same assignee as the '094 Application (Sherer and the assignee collectively referred to as the '782 Applicants).

kkkk. The '094 Application was reviewed by a different examiner than the '782 Application.

llll. The '094 and '782 Patents' disclosures relate to substantially the same subject matter. For example, the '782 Patent claims "receiving from said host computer and storing in said adapter receive buffer a remainder of said second packet, at least partially in parallel with transmitting said second packet through said transceiver from said adapter transmit buffer to said computer network communications media." This disclosure directly relates to the heart of the alleged invention claimed in the '094 Patent.

mmmm. At least the following references were reviewed by the '782 examiner and were material to, but not disclosed during, prosecution of the '094 Patent: U.S.

Patents 4,768,190 (Giancarlo), 5,210,829 (Bitner), and 5,121,479 (O'Brien) (collectively the '782 References).

nnnn. On January 14, 1994 and July 7, 1994, the '752 examiner issued rejections (the '782 Rejections) of the '782 Application.

oooo. Giancarlo relates to the limitations of the '872 Patent that call for supplying a signal, a buffer memory, network interface means, and a frame transmission task. O'Brien relates to supplying a signal and a buffer memory. Bitner relates to supplying a signal and detecting an underrun condition.

pppp. The '782 Applicants were participants in the prosecution of the '782 Patent and had a duty of candor in the prosecution that led to the '094 Patent.

qqqq. The '782 Applicants knew of facts sufficient to establish the materiality of the '782 References and the '782 Rejections. That is, they knew of the similarity in disclosure between the '094 and '782 disclosures, and at least the '782 assignee knew that the '782 References had been cited in the '782 Application.

rrrr. However, the copendency of the '782 Application, the '782 Rejections, and the '782 References were not disclosed in the '094 Prosecution.

ssss. On information and belief, the '782 Application, the '782 Rejections, and the '782 References were therefore concealed from the examiner in the '094 prosecution by a deliberate decision, with knowledge of their materiality and, because of the lack of any apparent other reason for their non-disclosure, with an intent to deceive.

Intel 82586 local area network coprocessor

tttt. On information and belief, the Intel 82586 local area network coprocessor and the documentation describing it (“the Intel 82586”) is material prior art, as defined by 37 C.F.R. § 1.56(b), because the Intel 82586 and the documentation describing it separately and collectively invalidates all of the asserted claims in the ’094 patent. Accordingly, a reasonable examiner would have found that the Intel 82586 and the documentation describing it, alone or in combination with other information, was material to the prosecution of the ’094 Patent, because, at a minimum, it established a prima facie case of unpatentability for all claims in the ’094 patent.

uuuu. Further, the Intel 82586 was known by the inventors, their counsel, and 3Com (collectively “Applicants”) to be prior art material to the application that led to the ’094 Patent, because the Intel 82586 is described as relevant prior art in the Background of the Invention section of the ’094 Application.

vvvv. On information and belief, some or all of Applicants had full knowledge of the operation and features of the Intel 82586, because they were able to summarize certain aspects of the operations and features of the Intel 82586 in the Background section of the ’094 Patent.

www. The prosecution history of the ’094 Patent demonstrates that Applicants withheld the source of their information concerning the operation and functionality of the Intel 82586 from the PTO during the filing and prosecution of the ’094 Application because only very limited disclosure was made of the Intel 82586 chip in the background of the ’094 Patent and no documentation describing its features or functionality was provided to the PTO, despite the fact that the chip and its documentation must have been known to some or all of

Applicants in order to provide the information set forth in the Background section of the '094 Patent.

xxxx. On information and belief, the documentation for the Intel 82586 would have disclosed that Applicants' description of the functionality and operation of that chip to the PTO was incomplete and misleading and that, in fact, the chip and its documentation invalidated at least all of the asserted claims of the '094 Patent.

yyyy. A reasonable examiner also would have found that the Applicants' description of the Intel 82586 and Applicants' assertions of patentability for the '094 Application were inconsistent with, and refuted by, the features and operation of the Intel 82586 and that the documentation demonstrating these inconsistencies, but withheld by some or all of Applicants, was not cumulative to information in the prosecution record, including cited references and documented communications between the Applicants and PTO.

zzzz. The prosecution history of the '094 Patent therefore demonstrates that the Applicants who were knowledgeable about the features and operation of the Intel 82586 chip misrepresented and knowingly and intentionally concealed material information regarding the state of the prior art, and specifically the features and operation of the Intel 82586.

aaaaa. The Applicants obtained allowance of claims then pending in the '094 Application as a result of not fully disclosing the Intel 82586 and withholding documentation concerning its features and functionality, by misrepresenting the true state of the prior art, and by misrepresenting how the Intel 82586 operated.

bbbbb. The '094 patent is therefore unenforceable due to inequitable conduct.

ccccc. There is a substantial likelihood that a reasonable examiner would have considered the above identified references, co-pending applications, and rejections important in

deciding whether to allow the '094 Patent to issue. In particular, the examiner would not have allowed at least claims 1, 9, and 28 with knowledge of the above-identified references, co-pending applications, and rejections.

dddd. At least some of the above identified references that were not cited during the prosecution of the '094 Patent were not cumulative to the prior art made of record during the prosecution of the '094 Patent.

**SEVENTH AFFIRMATIVE DEFENSE
(RESERVATION)**

75. Brother reserves all defenses under the Federal Rules of Civil Procedure, the Patent Laws of the United States, and any other defenses, at law or in equity, that may now exist or in the future be available based on discovery and further factual investigation in this case.

IX. PRAYER FOR RELIEF

WHEREFORE, Brother prays for judgment and relief as follows:

- A. Dismissing USEI's Complaint with prejudice in its entirety;
- B. Denying all remedies and sought-after injunctive relief by USEI in its Complaint;
- C. Determining that the '094 Patent, '872 Patent, '313 Patent, and '459 Patent are unenforceable;
- D. Determining that this is an exceptional case under 35 U.S.C. § 285, and awarding Brother its reasonable attorneys' fees and costs incurred in this action; and
- E. Awarding Brother such further and additional relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Brother International Corporation demands a jury trial on all matters so triable.

Dated: November 7, 2011

Respectfully submitted,

/David M. Schlitz/
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ATTORNEYS FOR DEFENDANT
Brother International Corporation

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served this 7th day of November, 2011, with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3). Any other counsel of record will be served by electronic mail, facsimile transmission and/or first class mail on this same date.

/s/ David M. Schlitz